ORDER NO. MD9707062C8-

Service Manual

CD Stereo Syster

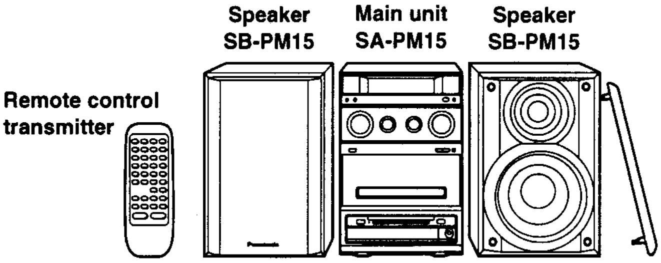
SA-PM15

CD Stereo System

Discard the SA-PM15 Service Manual issued as a provisional edition (Order No. MD9707062C8), and in place of it, use the subject Service Manual.

Colour
(S)......Silver Type

Areas
(E) .... Europe.
(EB) ...... Great Britain
(EG)...... Germany.
(GN) ..... Oceania.



System: SC-PM15

Main unit	SA-PM15
Speakers	SB-PM15

Specifications (DIN 45 500)

AMPLIFIER SECTION

RMS power output	
THD 10 %, both channels driven	
LOW	14 W per channel (6 Ω)
HIGH	6 W per channel (6 Ω)
Total BI-AMP power	20 W per channel
Input sensitivity	
AUX	250 mV
Input impedance	
AUX	47 kΩ
Output impedance	
Headphones	16 – 32 Ω

FM TUNER SECTION

Frequency range	87.50 – 108.00 MHz
Sensitivity	
S/N 26 dB	1.5 μV
Antenna terminal(s)	75 Ω (unbalanced)

AM TUNER SECTION

Frequency range	522 – 1629 kHz
Sensitivity	
S/N 20 dB	500 μV/m

CASSETTE DECK SECTION

Track system	4 track, 2 channel
Heads	
Record/playback	Solid permalloy head
Erasure	Double gap ferrite head
Motor	DC servo motor
Recording system	AC bias 100 kHz
Erasing system	AC erase
Tape speed	4.8 cm/s
Frequency response (–3, +3 dB)	
Normal (TYPE I)	50 Hz – 13 kHz
HIGH (TYPE II)	50 Hz – 13 kHz
S/N	52 dB (A weighted
Wow and flutter	0.18 % (WRMS
Fast forward and rewind times	Approx. 120 seconds with C-60 cassette tape

CD SECTION

Sampling frequency	44.1 kHz
Decording	16 bit linea
Beam source/wave length	Semiconductor laser / 780 nm
Number of channels	Stere
S/N	
SP OUT	82 dB (JIS.A)
Wow and flutter	Below measurable limi
Digital filter	8 fs
D/A converter	MASH (1 bit DAC

GENERAL

Power supply	
For (E) and (EG) areas	AC 220 – 230 V, 50 Hz
For (EB) area	AC 230 – 240 V, 50 Hz
Power consumption	66 W
Dimensions (W × H × D)	195 × 287 × 296 mm
Weight	4.9 kg

Notes:
1. Design and specifications are subject to change without notice. Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

MASH is a trademark of NTT

⚠WARNING
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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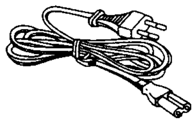
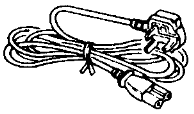
■ Accessories

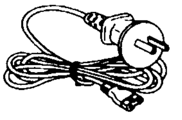
- AC power supply cord
  (E) and (EG) areas : (RJA0019-2K) 1



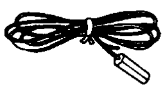
(EB) area : (VJA0733) 1



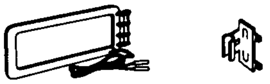
(GN) area : (RJA0036-A) 1



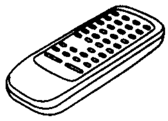
- FM indoor antenna
  (E), (EB) and (EG) areas : (RSA0007) .. 1
  (GN) area : (RSA0006) 1



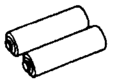
- AM loop antenna set
  (RSA0022) 1



- Remote control transmitter
  (EUR644851) ....



- Batteries for remote control transmitter
  (UM-4, "AAA", R03) ....
  Note: These are available on sales rou



■ Before Repair

(1) Turn off the power supply. Using a 10 Ω, 10 W resistor, connect both ends of power supply capacitors (C701, C702) in ord discharge the voltage.

(2) Before turning the power supply on, after completion of repair, slowly apply the primary voltage by using a power supply vol controller to make sure that the consumed current at 50 Hz in NO SIGNAL mode should be shown below with respect to su voltage 230 V.

Power supply voltage	AC 230 V, 50 Hz
Consumed current	Less than 200 mA

■ Protection Circuitry

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires ar "shorted", or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.

If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the cause of the problem and correct it.
3. Switch ON the power once again.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

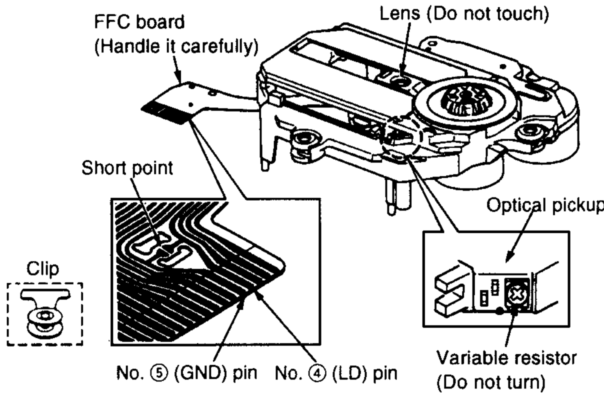
CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pickup) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pickup).

• Handling of traverse deck (optical pickup)

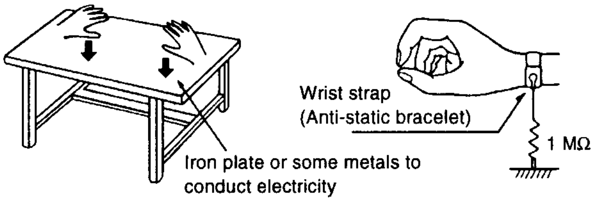
1. Do not subject the traverse deck (optical pickup) to static electricity as it is extremely sensitive to electrical shock.
2. To protect the laser diode against electrostatic breakdown, short the flexible board (FFC board) with a clip or similar object.
3. Take care not to apply excessive stress to the flexible board (FFC board).
4. Do not turn the variable resistor (laser power adjustment). It has already been adjusted.



• Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use the anti-static wrist strap to discharge the static electricity from your body.
2. Work table grounding
   Put a conducive material (sheet) or steel sheet on the area where the traverse deck (optical pickup) is placed, and ground the sheet.

Caution:
The static electricity of your clothes will not be grounded through the wrist strap. So, take care not to let your clothes touch the traverse deck (optical pickup).


Wrist strap
(Anti-static bracelet)
1 MΩ
Iron plate or some metals to conduct electricity

Caution when Replacing the Traverse Deck:

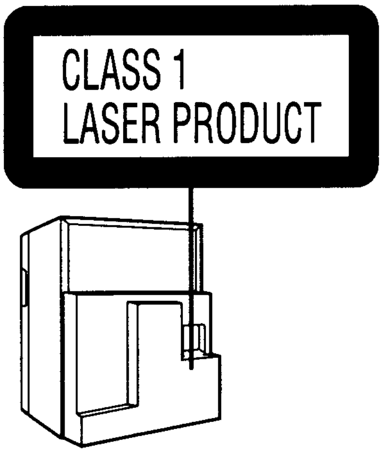
The traverse deck has a short point shorted with solder to protect the laser diode against electrostatic breakdown. Be sure to remove the solder from the short point before making connections.

■ Precaution of Laser Diode

CAUTION: This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pick up lens.
Wave length: 780 nm
Maximum output radiation power from pick up: 100 μW/VDE

Laser radiation from the pick up unit is safety level, but be sure the followings:

1. Do not disassemble the pick up unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pick up unit. It was already adjusted.
3. Do not lock at the focus lens using optical instruments.
4. Recommend not to lock at pick up lens for a long time.



DANGER	INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.	(Inside of product)
ADVARSEL	USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.	(Indersiden at apparatet)
VARO!	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTÖNTÄ LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.	(Tuotteen sisällä)
VARNING	OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.	(Apparatens insida)
ADVARSEL	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES OG SIKKERHEDSLÅS BRYTES. UNNGÅ EKSPONERING FOR STRÅLEN.	(Produktets innside)
VORSICHT	UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.	(Im Inneren des Gerätes)

■ Caution for AC Main Lead

("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.
Check for the ASTA mark ◈ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer..

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFETY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:
Blue: Neutral, Brown: Live.
As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N coloured Black or Blue.
The wire which is coloured Brown must be connected to the terminal which is marked with letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF–KEEP DRY.

Before use

Removal the connector cover.

How to replace the fuse

The location of the fuse differ according to the type o
mains plug (figures A and B). Confirm the AC mains
fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

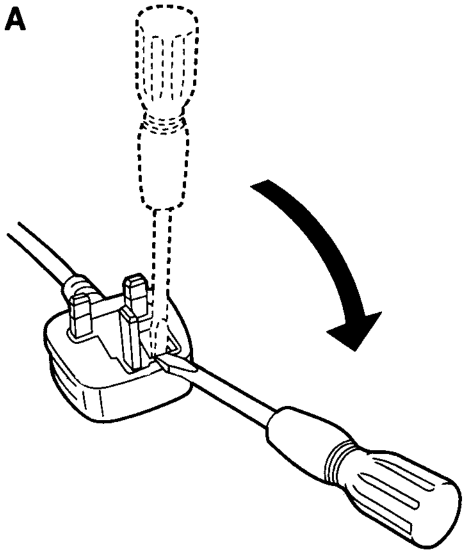
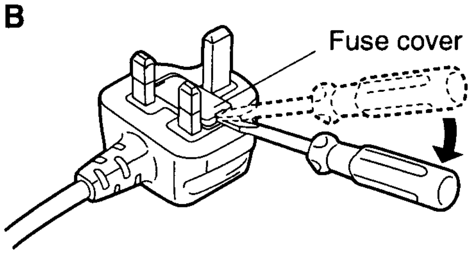


Figure B



2. Replace the fuse and close or attach the fuse cove

Figure A

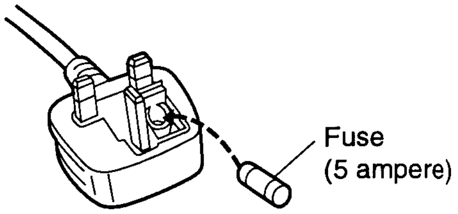
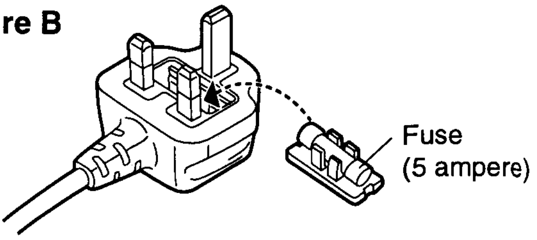
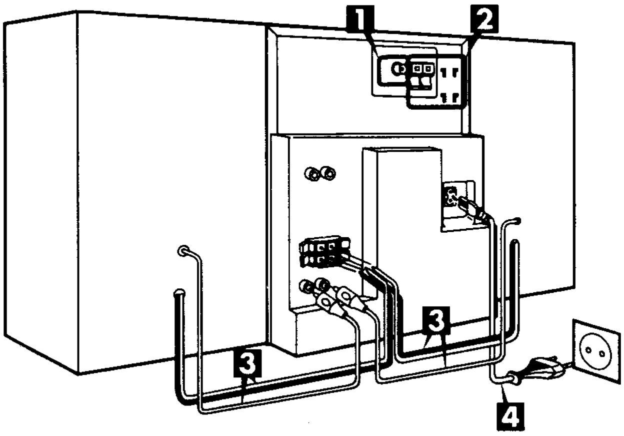


Figure B



■ Connections



- Plug the AC power cord into a household AC outlet only after al other connections have been made.
- To prepare the AM loop antenna wire and speaker cords, twist th vinyl cover tip and pull off.
- For your listening pleasure, keep your speakers from touching th system.
- Speakers are designed identically so that no left or right channe orientation is necessary.
- You can take the front net off speakers.

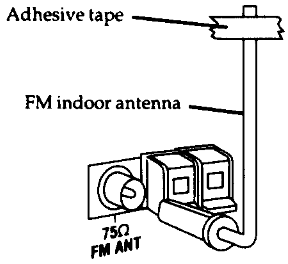
1 Connect the FM indoor antenna.

Tape the antenna to a wall or column, in a position where radi signals are received with the least amount of interference.

Note

For best reception sound quality:
An FM outdoor antenna is recommended.

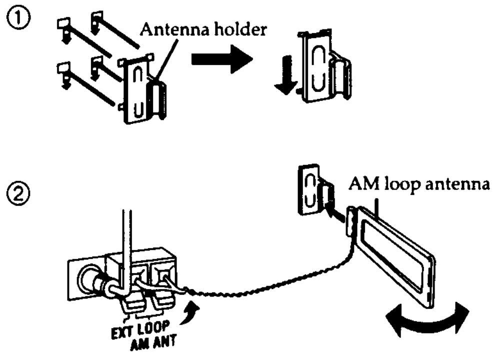
1



2 Connect the AM loop antenna.

After attaching the antenna, turn on the system and tune in a broadcast station. Then, turn the antenna to the angle of bes reception and least interference.

2

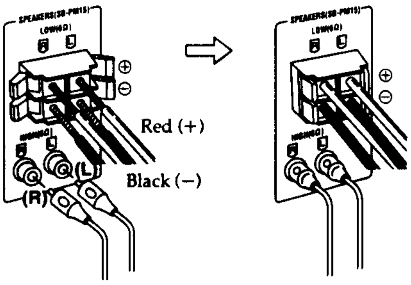


3 ①Connect the right (R) and left (L) speake cords (pin type).
②Connect the right (R) and left (L) speake cables.

Note

- To prevent damage to circuitry, never short-circuit positive (+) and negative (−) speaker wires.
- Be sure to connect only positive (red) wires to positive (+ terminals and negative (black) wires to negative (−) terminals

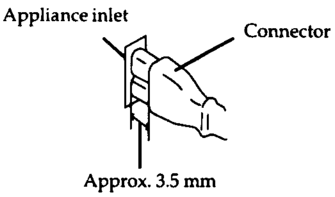
3



Caution
Use the speakers only with the recommended system.
Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire.
Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.

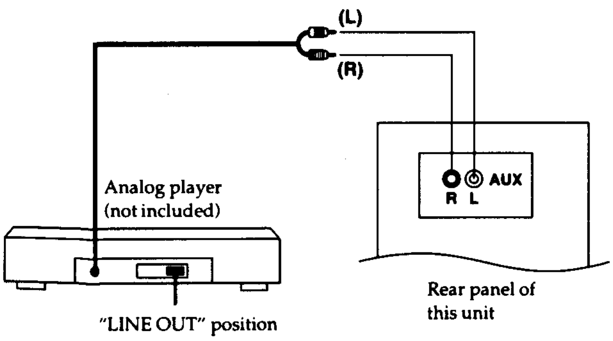
4 Connect the AC power cord.

Insertion of Connector
Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing.
However there is no problem using the unit.



External unit connection

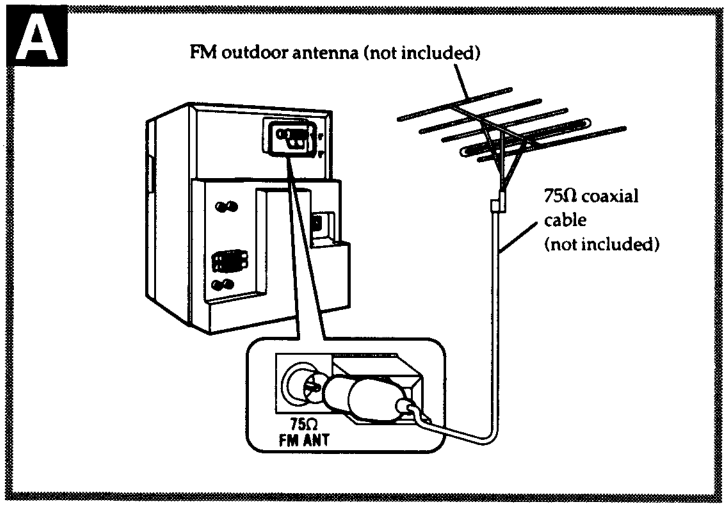
A

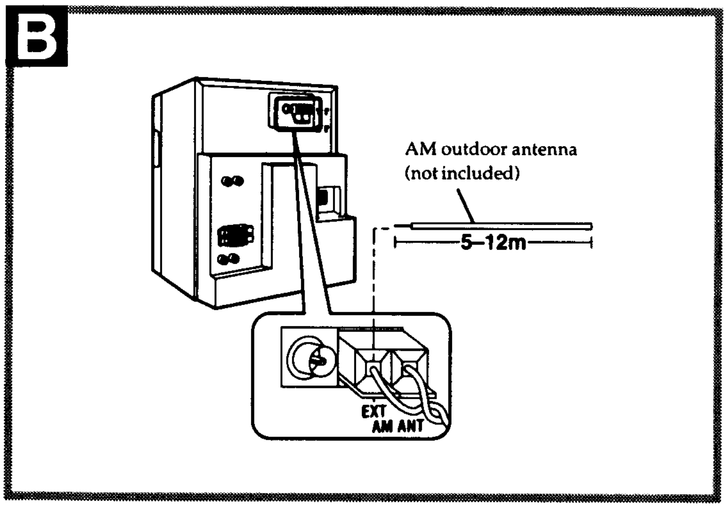


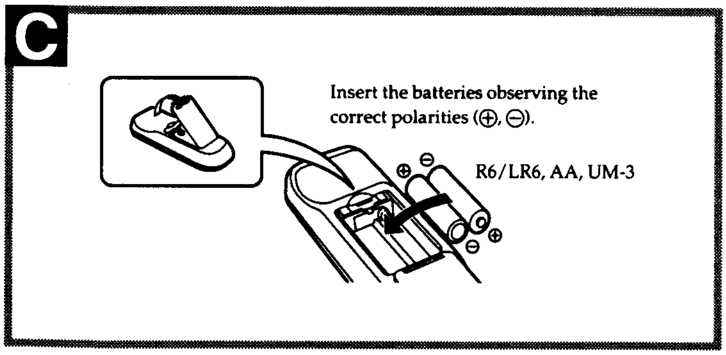
- For details, refer to the instruction manual of the units which are to be connected.
- This example shows how to connect the analog player with the PHONO OUT/LINE OUT switch.
- When units other than those described to the left are to be connected, please consult with your audio dealer.

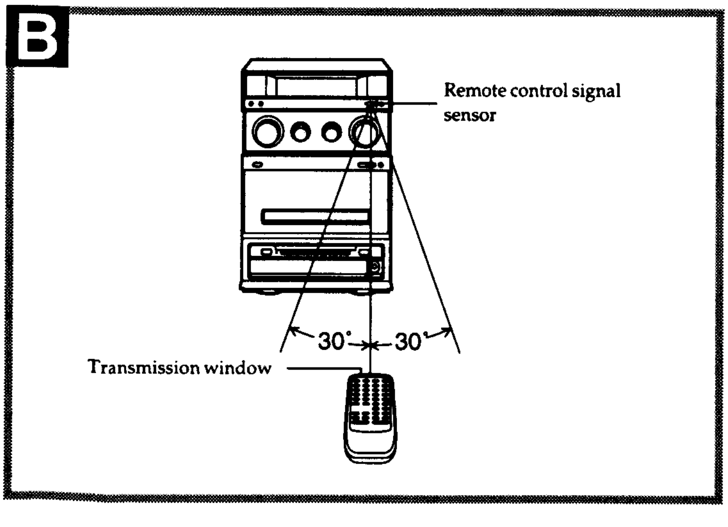
Note

- Only an analog player with a built-in phono equalizer can be connected.
- Set the switch to the "LINE OUT" position at the back of the analog player.


A
FM outdoor antenna (not included)
75Ω coaxial cable (not included)
75Ω FM ANT


B
AM outdoor antenna (not included)
5–12m
EXT AM ANT


C
Insert the batteries observing the correct polarities (⊕, ⊖).
R6/LR6, AA, UM-3
⊕
⊖


B
Remote control signal sensor
30°
30°
Transmission window

Optional antenna connections

You may need an outdoor antenna if you use this system in a r
tainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna A

Disconnect the FM indoor antenna if an FM outdoor ante
installed.

Note

An outdoor antenna should be installed by a qualified tech
only.

AM outdoor antenna B

Connect the outdoor antenna without removing the AM lo
tenna. Run 5 to 12 m of vinyl-covered wire horizontally a
window or other convenient location.

Note

When the unit is not in use, disconnect the outdoor antenna t
vent possible damage that may be caused by lightning. Never
outdoor antenna during an electrical storm.

■ Concerning the Remote Cont

Battery installation

Use of batteries

- Do not mix old and new batteries, or batteries of different
(manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not atte
disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of
remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use rechargeable type batteries.

Battery life

The battery life is about one year.

The batteries should be replaced if commands from the remote
trol transmitter do not operate the unit even when the transmi
held close to the front panel.

Correct method of use

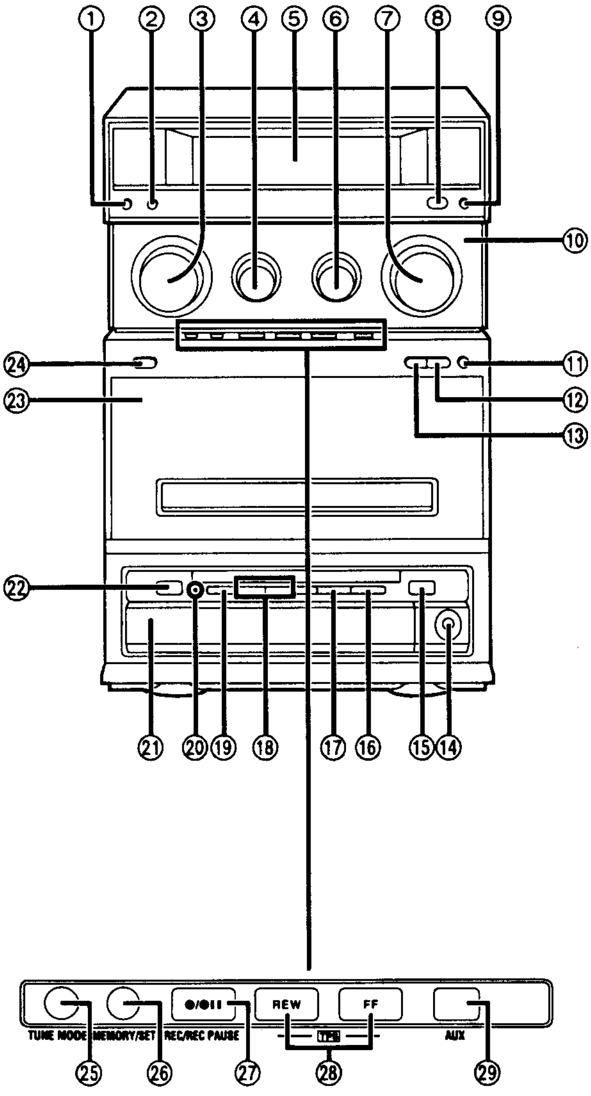
Operations notes

- Do not place obstacles between the remote control signal senso
remote control unit.
- Do not expose the remote control signal sensor to direct sunlig
to the bright light of an invertor fluorescent light.
- Take care to keep the remote control signal sensor and end o
remote control unit free from dust.
- If this system is installed in a rack with glass doors, the glass d
thickness or color might make it necessary to use the remote co
a shorter distance from the system.

To prevent damage

- Do not place heavy items.
- Do not disassemble or reconstruct.
- Do not spill water or other liquids.

■ Front Panel Controls



① **Play timer/record timer button (⏲ PLAY/⏲ REC)**
② **Clock/timer button (CLOCK/TIMER)**
③ **Tune/time adjust control (TUNE/TIME ADJ)**
④ **Bass control (BASS)**
⑤ **Display**
⑥ **Treble control (TREBLE)**
⑦ **Volume control (VOLUME)**
⑧ **Remote control signal sensor**
⑨ **Glide panel open/close button (OPEN/CLOSE)**
⑩ **Glide panel**
⑪ **Cassette holder open button (⏏ OPEN)**
⑫ **Cassette play/direction button (◀ ▶ PLAY/DIR)**
⑬ **Cassette stop button (■ STOP)**
⑭ **Headphone jack (🎧)**
⑮ **CD tray open/close button (⏏/CLOSE)**
⑯ **CD play/pause button (▶/❚❚ PLAY/PAUSE)**
⑰ **CD stop button (■ STOP)**
⑱ **Skip/search buttons (⏮ ⏭ SKIP)**
⑲ **CD edit button (CD EDIT)**
⑳ **Power indicator**

This indicator illuminates to indicate the power is supplied to thi unit when the unit is connected to the household AC outlet.

㉑ **CD tray**
㉒ **Power "⏻/I" switch (POWER, ⏻/I)**

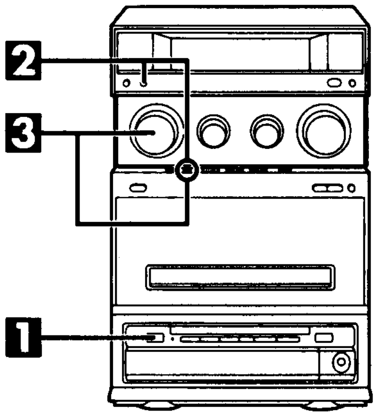
Press to switch the unit from on to standby mode or vice versa. I standby mode, the unit is still consuming a small amount c power.

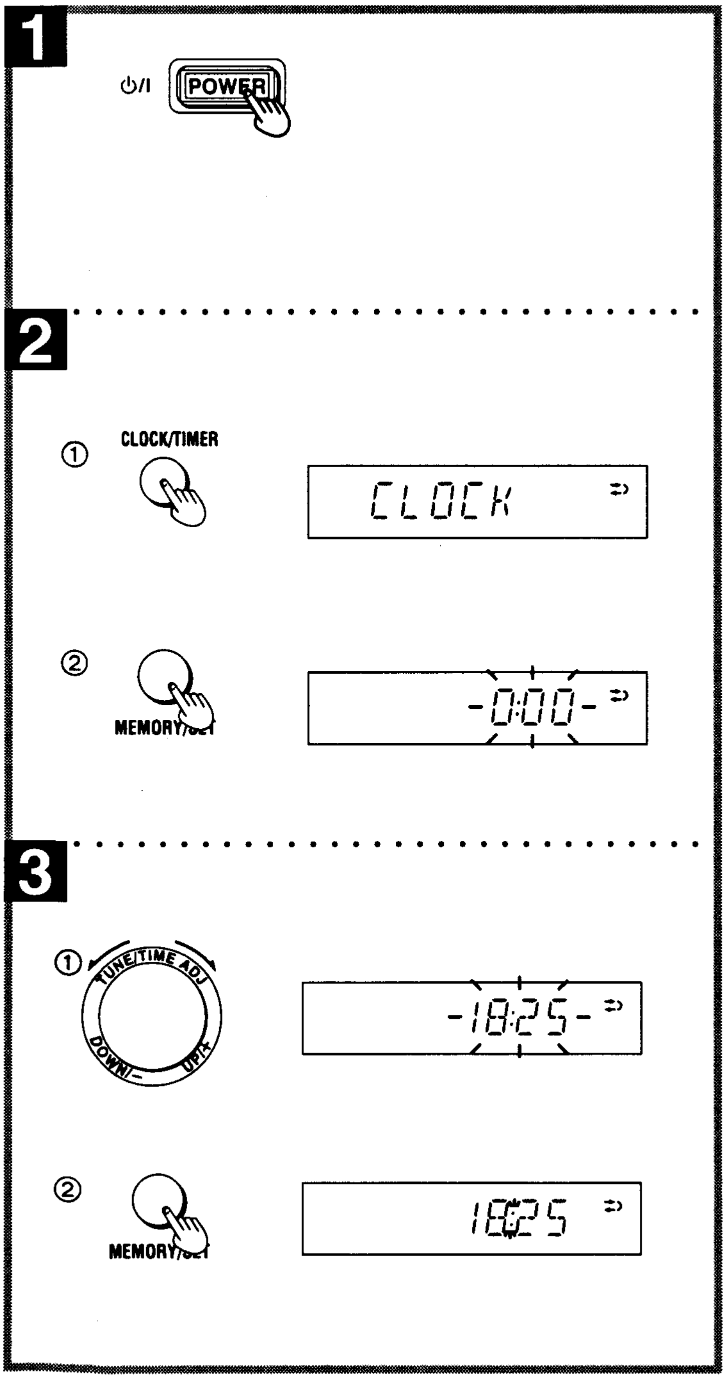
㉓ **Cassette holder**
㉔ **Tuner/band select button (TUNER/BAND)**
㉕ **Tuning mode select button (TUNE MODE)**
㉖ **Memory/set button (MEMORY/SET)**
㉗ **Record/record pause button (●/● ❚❚ REC/REC PAUSE)**
㉘ **Fast forward/rewind/tape program sensor buttons (TPS REW FF)**
㉙ **AUX button (AUX)**

Opening/closing the glide panel

When the power is turned on, the glide panel retracts automaticall enabling access to the operation buttons (㉕–㉙).
When the power is turned off, the glide panel closes automatically.
If you want to open/close the glide panel manually, press OPEN, CLOSE (⑨) when the power is on. When the glide panel is close manually, the display light dims.

■ Setting the Time





This is a 24-hour display clock.
This example in the figure shows how to set the time for 18:25.

1 Switch on the power.
The glide panel retracts enabling access to the oper buttons.

2 ① Press CLOCK/TIMER to select "CLOCK"
Every time you press the button;

CLOCK→⏲ PLAY→⏲ REC
↑—Previous display←—┘

② (within 5 seconds or so)
Press MEMORY/SET.

3 ① Turn TUNE/TIME ADJ to the right or le show the present time.

② Press MEMORY/SET to finish setting time.

The display will return to the previous display setting about 4 seconds.

To display the time

- **To check**
  Press CLOCK/TIMER to select "CLOCK".
  The time will be displayed for about 5 seconds and then the di will return to whatever was previously displayed.
- **To display the time continuously** by remote control only
  Press DISPLAY to select present time.
  Every time you press the button:
  Present time———→Tape counter
  ↑———Previous display←———┘

For your reference
If the time has been set, the display will default to present time in standby mode.

Operation Checks and Main Component Replacement Procedures

NOTE 1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.

2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

3. Select items from the following index when checks or replacement are required.

• Contents

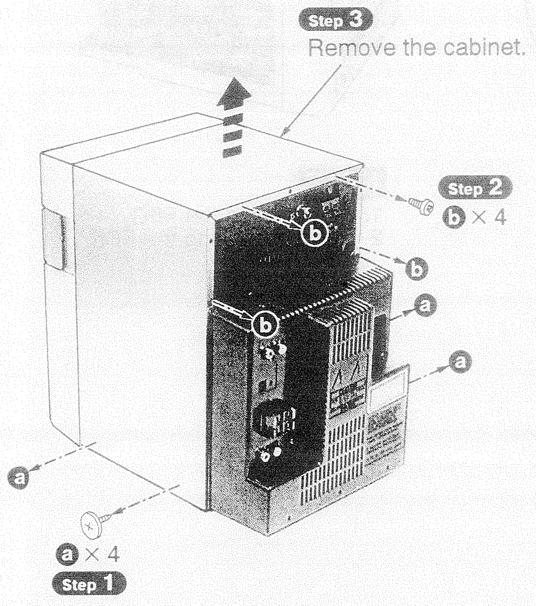
• Checking Procedures for each P.C.B. Page.
1. Checking for the main P.C.B., power supply P.C.B. and mechanism control P.C.B.. •••••••••••••••••••• 9,10.
2. Checking for the FL / tuner P.C.B.. •• 10.
3. Checking for the CD servo P.C.B.. •• 11.
4. Checking for the confirmation of the cassette mechanism operation. •••••••••••••••••••••••••••••• 11,12.

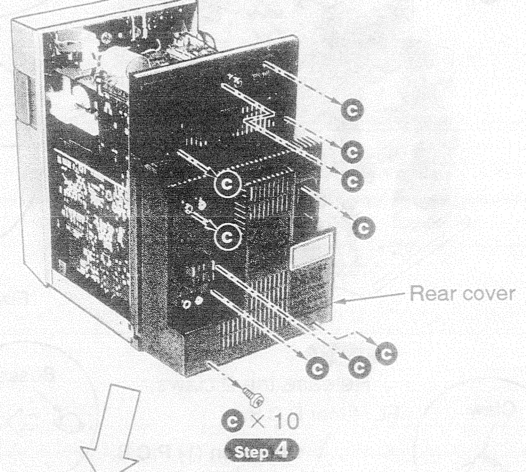
• Main Component Replacement Procedures
1. Replacement for the cassette lid. •• 13.
2. Replacement for the traverse deck ass'y. ••• 13~15.
3. Replacement for the belt, loading motor ass'y and loading switch. •••••••••••••••••••••••••••• 16.
4. Replacement for the slide panel motor ass'y and belt. ••••••••••••••••••••••••••••••••• 16.

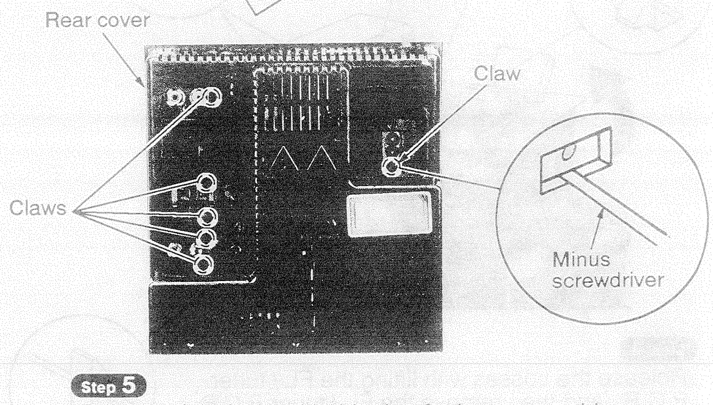
• Measure for tape trouble •• 17.

Checking Procedure for each P.C.B.

1. Checking for the main P.C.B., power supply P.C.B. and mechanism control P.C.B.

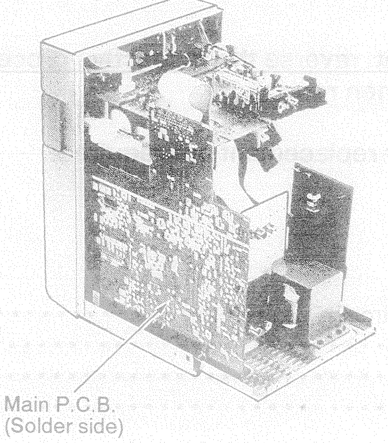




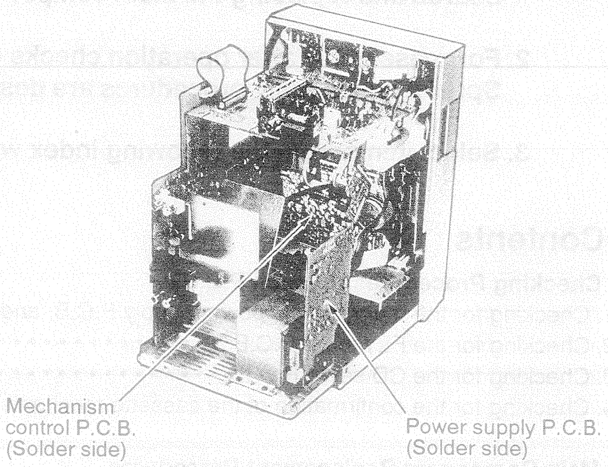


Step 5
Release the claws with thin tip of minus screwdriver, and then remove the rear cover.

- **Check the main P.C.B. as shown below.**


Main P.C.B.
(Solder side)

- **Check the power supply P.C.B. and mechanism control P.C.B. as shown below.**

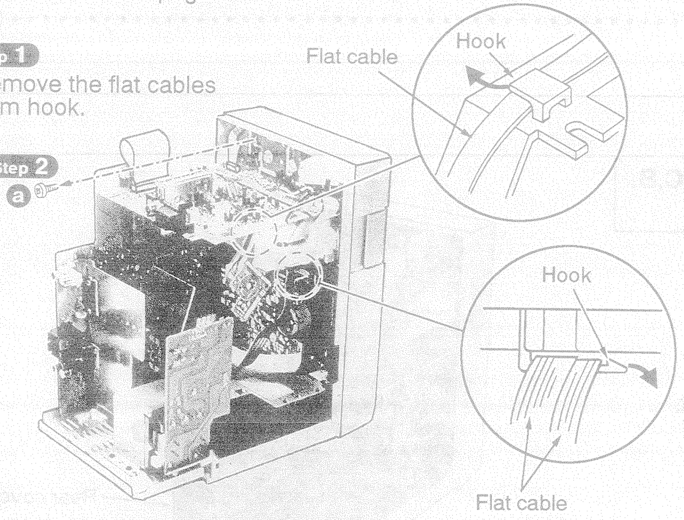

Mechanism control P.C.B.
(Solder side)
Power supply P.C.B.
(Solder side)

2. Checking for the FL / tuner P.C.B.

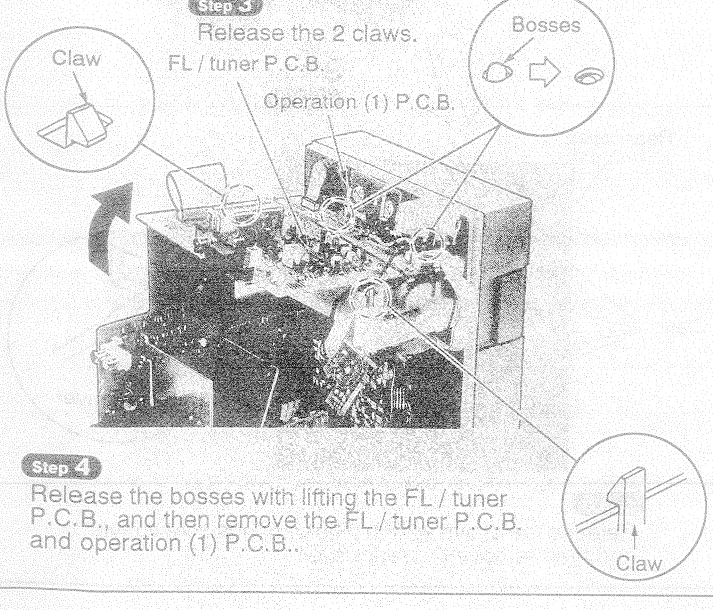
- Follow the item 1 (**Step 1** ~ **Step 5**) in checking procedures for each P.C.B. on page 9.

Step 1
Remove the flat cables from hook.

Step 2

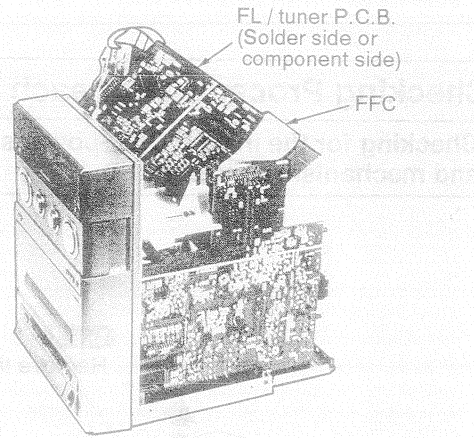

a
Flat cable
Hook
Hook
Flat cable

Step 3
Release the 2 claws.


Claw
FL / tuner P.C.B.
Operation (1) P.C.B.
Bosses
Claw

Step 4
Release the bosses with lifting the FL / tuner P.C.B., and then remove the FL / tuner P.C.B. and operation (1) P.C.B..

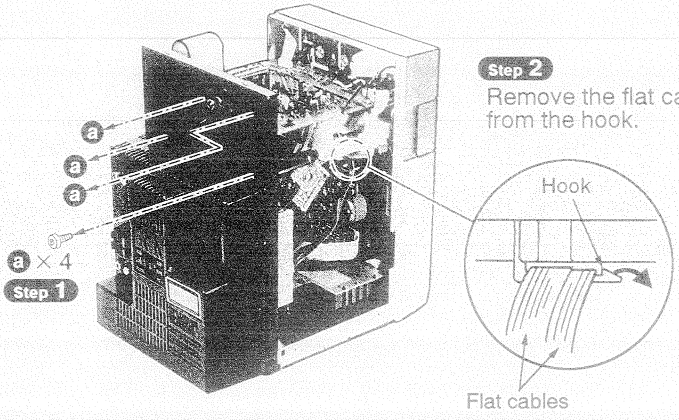
- **Check the FL / tuner P.C.B. as shown below.**


FL / tuner P.C.B.
(Solder side or component side)
FFC

NOTE
1. Do not bend the FFC.
2. Avoid damaging the FFC.

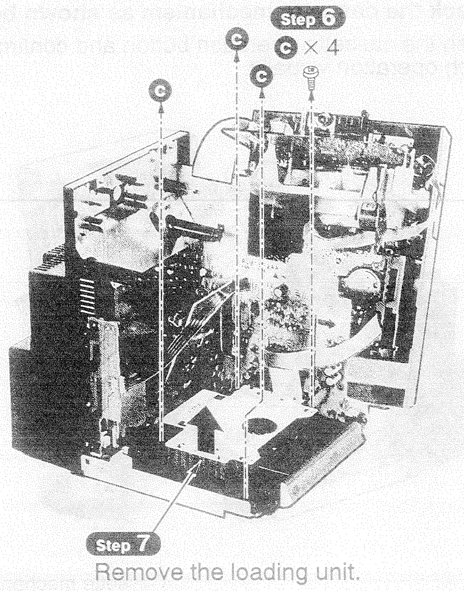
3. Checking for the CD servo P.C.B.

- Follow the item 1 (Step 1 ~ Step 3) in checking procedures for each P.C.B. on page 9.



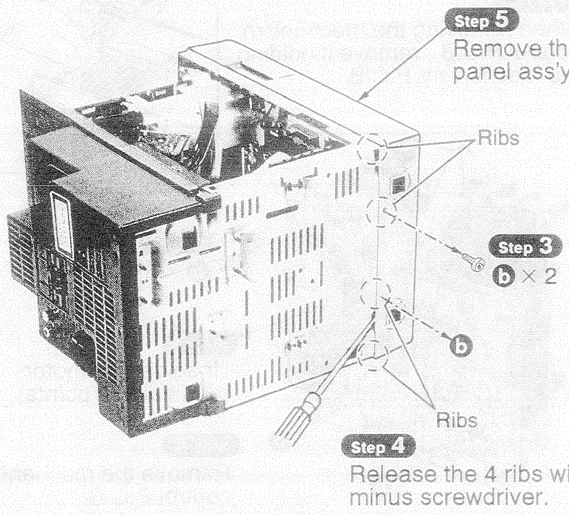
Step 1
ⓐ × 4

Step 2
Remove the flat cables from the hook.



Step 6
ⓒ × 4

Step 7
Remove the loading unit.

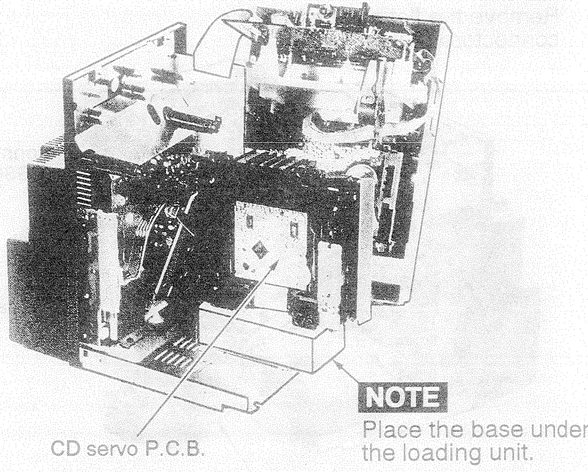


Step 5
Remove the front panel ass'y.

Step 3
ⓑ × 2

Step 4
Release the 4 ribs with minus screwdriver.

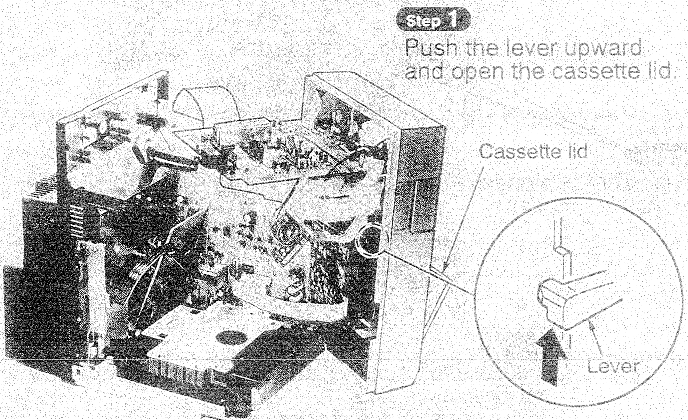
- **Check the CD servo P.C.B. as shown below.**



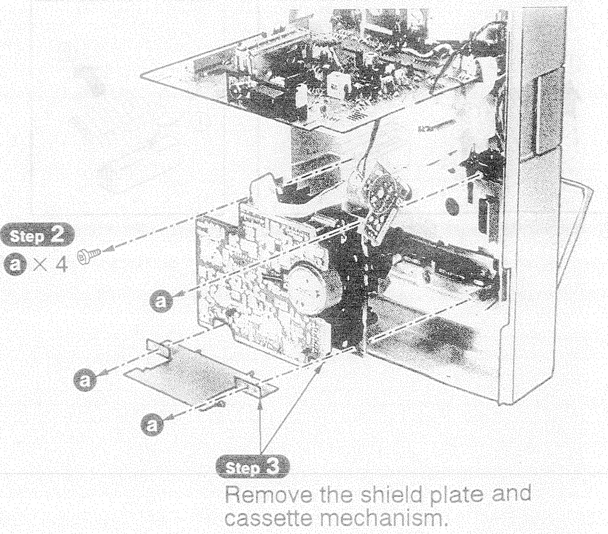
NOTE
Place the base under the loading unit.

4. Checking for the confirmation of the cassette mechanism operation

- Follow the item 1 (Step 1 ~ Step 3) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (Step 1 ~ Step 5) in checking procedures for each P.C.B. on page 11.



Step 1
Push the lever upward and open the cassette lid.

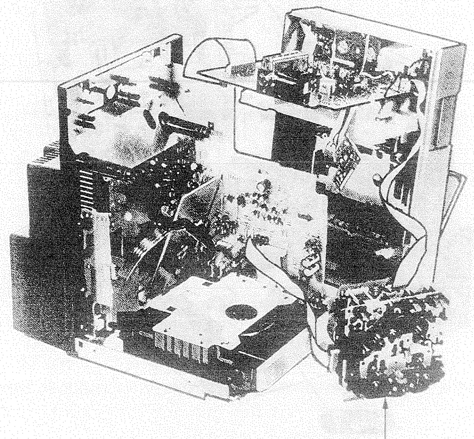


Step 2
ⓐ × 4

Step 3
Remove the shield plate and cassette mechanism.

• **Check the cassette mechanism as shown below.**

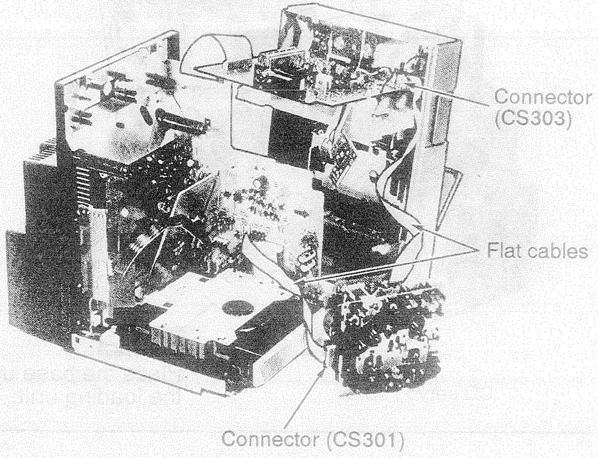
(Push the cassette operation button and confirm each operation visually.)


Cassette mechanism

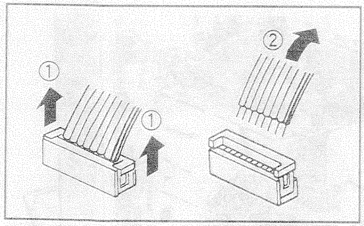
Removal of the mechanism control P.C.B. and mechanism P.C.B. for replacing parts.

Step 1

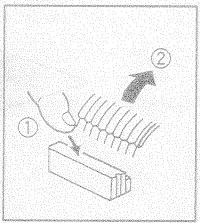
Remove the flat cables from the connectors (2 points).


Connector (CS303)
Flat cables
Connector (CS301)

• **Removal of the connector (CS303)**

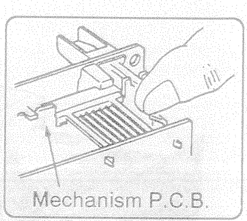


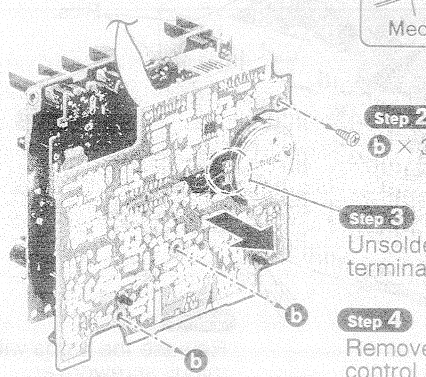
(CS301)



NOTE

When removing the mechanism control P.C.B., remove it holding the mechanism P.C.B..


Mechanism P.C.B.



Step 2

ⓑ × 3

Step 3

Unsolder the motor terminals. (2 points)

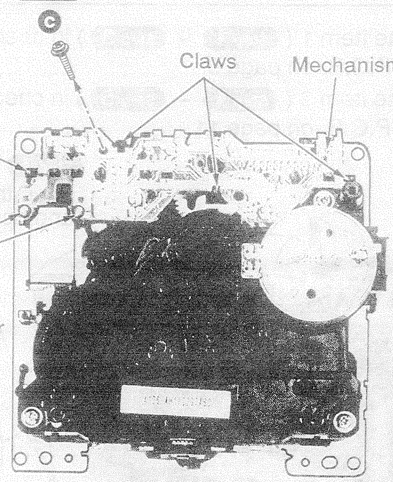
Step 4

Remove the mechanism control P.C.B.

(The parts on the mechanism control P.C.B. can be replaced.)

Step 5

ⓒ


Claws
Mechanism P.C.B.
Claw

Step 6

Unsolder the plunger terminals. (2 points)

Step 7

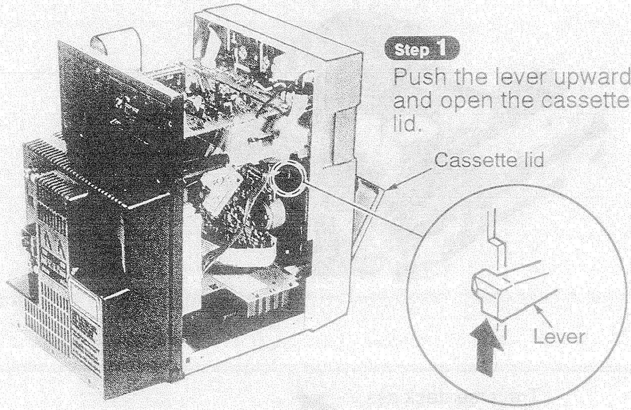
Release the 4 claws, and then remove the mechanism P.C.B..

(The parts on the mechanism P.C.B. can be replaced.)

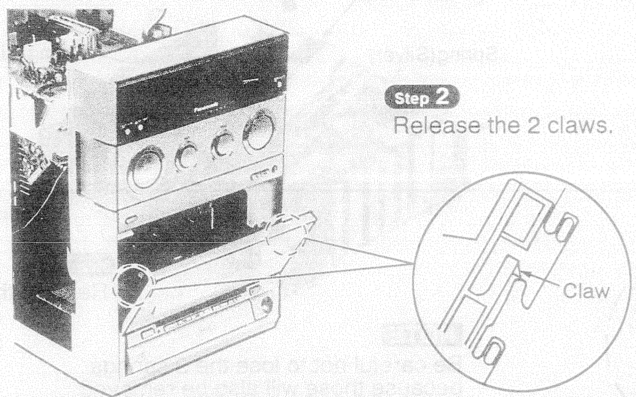
Main Component Replacement Procedures

1. Replacement for the cassette lid

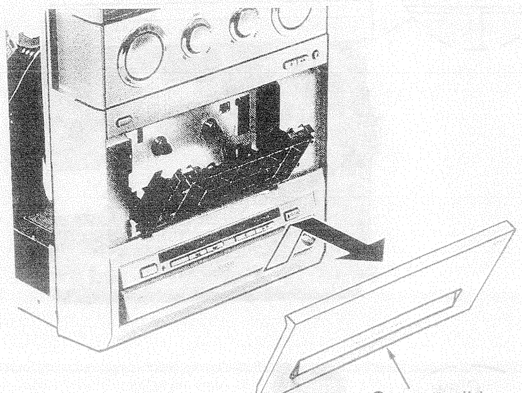
- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.



Step 1
Push the lever upward and open the cassette lid.



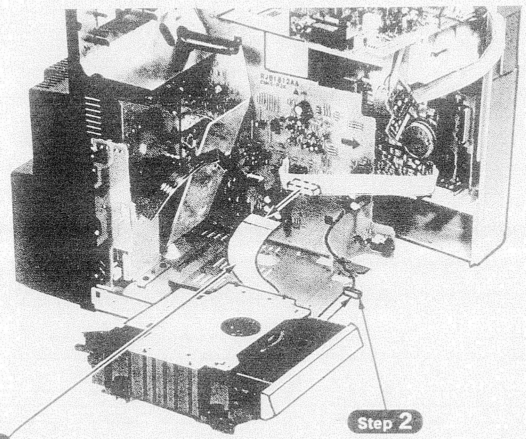
Step 2
Release the 2 claws.



Step 3
Remove the cassette lid in the direction of arrow.

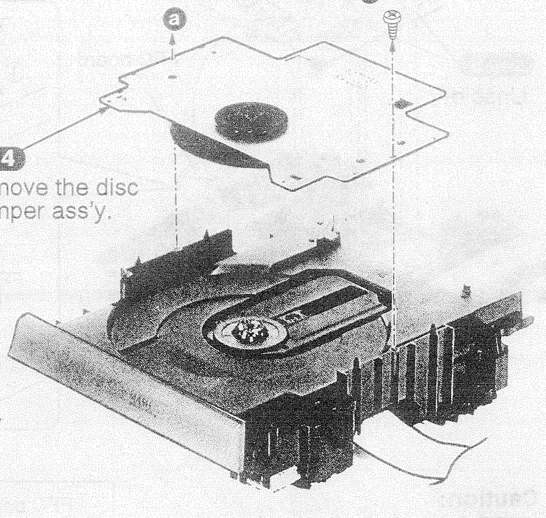
2. Replacement for the traverse deck ass'y

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (**Step 1** ~ **Step 7**) in checking procedures for each P.C.B. on page 11.



Step 1
Pull out the FFC.

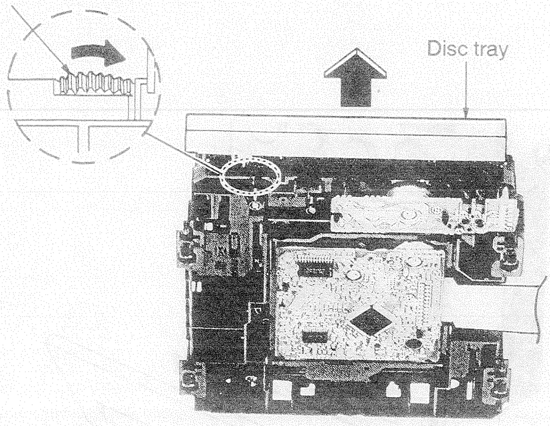
Step 2
Remove the connector.



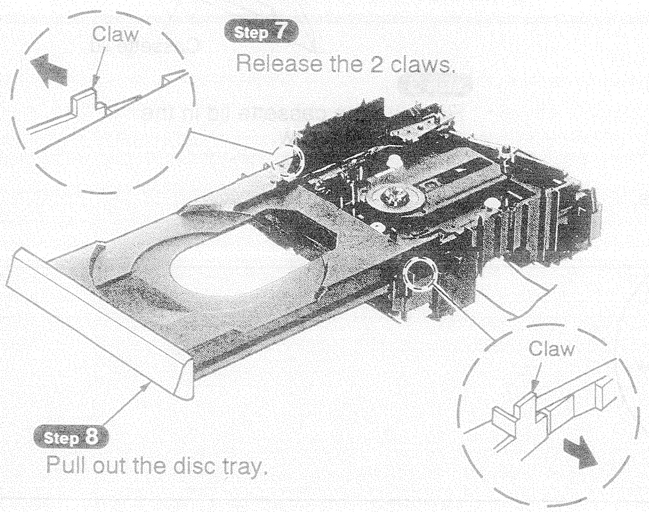
Step 3
ⓐ × 2

Step 4
Remove the disc clamper ass'y.

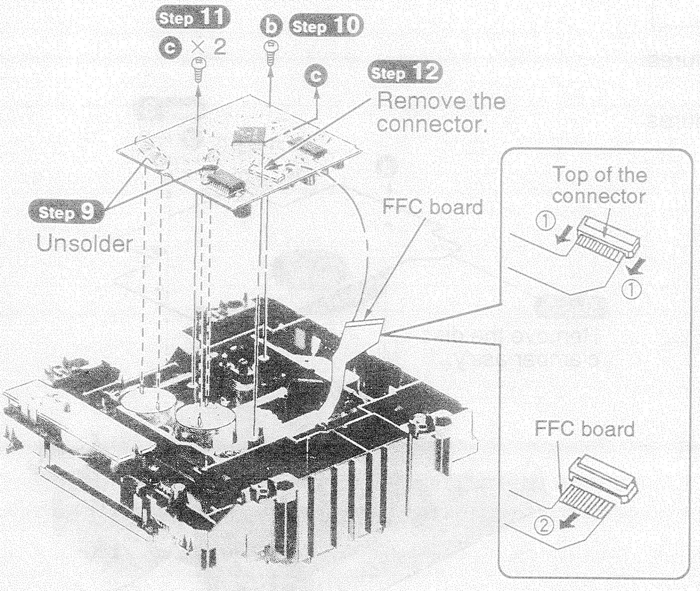
Step 6
Rotate the gear, and then pull out the disc tray.



Step 7
Release the 2 claws.



Step 8
Pull out the disc tray.


Ⓒ × 2
ⓑ
Ⓒ
FFC board
Top of the connector
①
①
FFC board
②

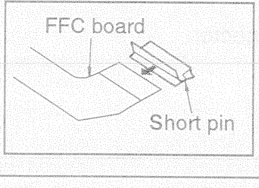
Step 9 Unsolder

Step 10 ⓑ

Step 11 Ⓒ × 2

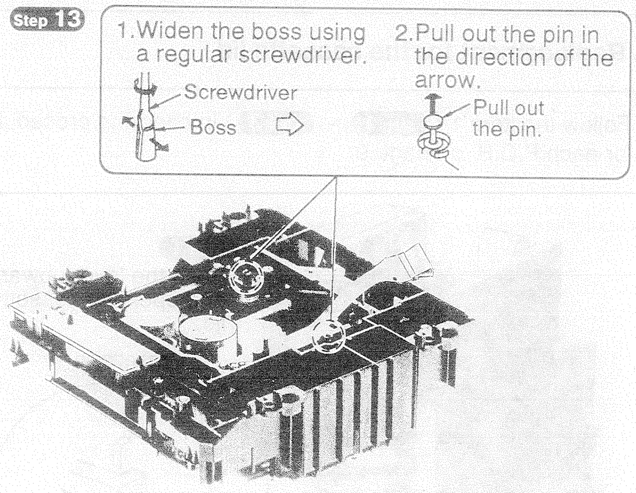
Step 12 Remove the connector.

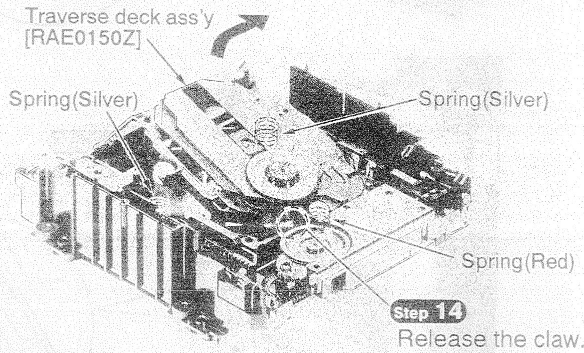
Caution:
Insert a short pin into the traverse unit FFC board.
(Refer to "Hnading Precautions for Traverse Deck" on page 3.)


FFC board
Short pin

Step 13

1. Widen the boss using a regular screwdriver.
2. Pull out the pin in the direction of the arrow.

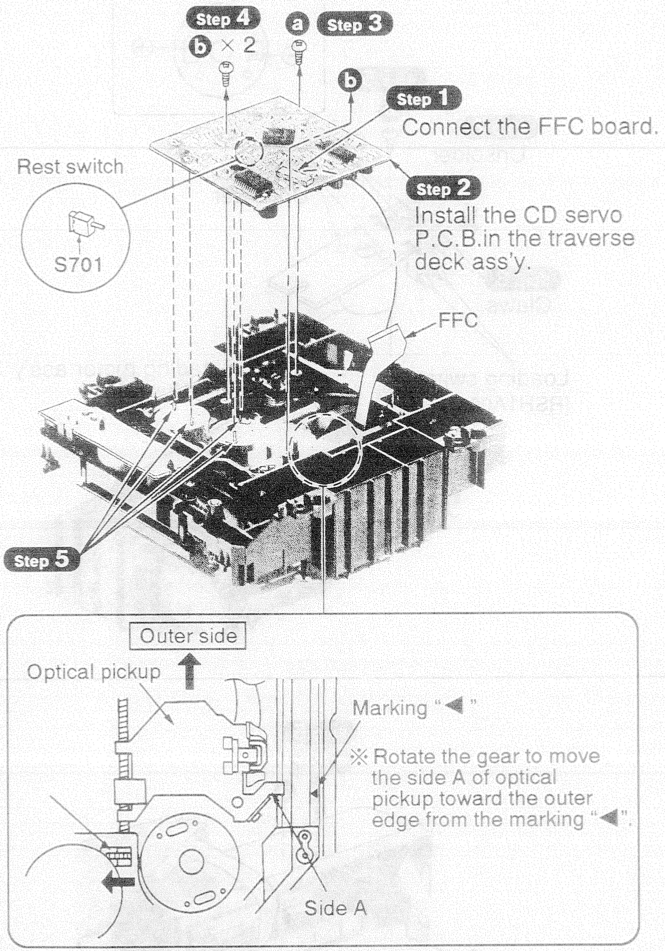

Screwdriver
Boss
Pull out the pin.


Traverse deck ass'y
[RAE0150Z]
Spring(Silver)
Spring(Silver)
Spring(Red)

Step 14
Release the claw.

NOTE
Be careful not to lose the 3 springs because those will also be removed on removal of the traverse deck ass'y.

Installation of the CD servo P.C.B. after replacement


Step 4
ⓑ × 2
ⓐ Step 3
ⓑ
Rest switch
S701
FFC
Step 5
Outer side
Optical pickup
Marking "◀"
Side A

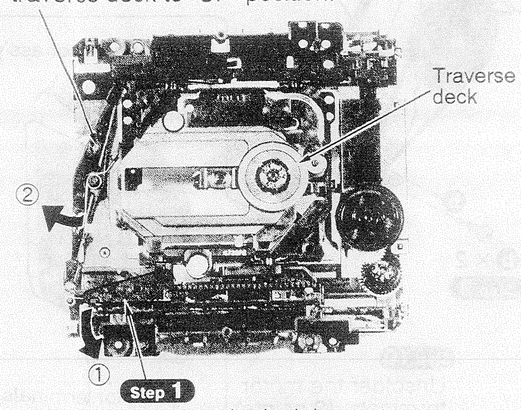
Step 1 Connect the FFC board.

Step 2 Install the CD servo P.C.B.in the traverse deck ass'y.

※ Rotate the gear to move the side A of optical pickup toward the outer edge from the marking "◀".

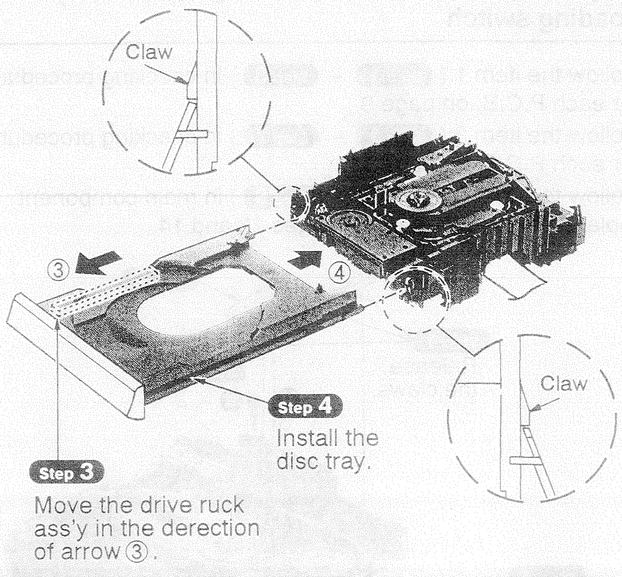
NOTE
Before installing the CD servo P.C.B., move the optical pickup toward the outer edge from the mark "▼". [Otherwise, the rest detect switch (S701) mounted on the CD servo P.C.B. may be damaged.]

Installation of the disc tray after replacement


Traverse deck
②
①

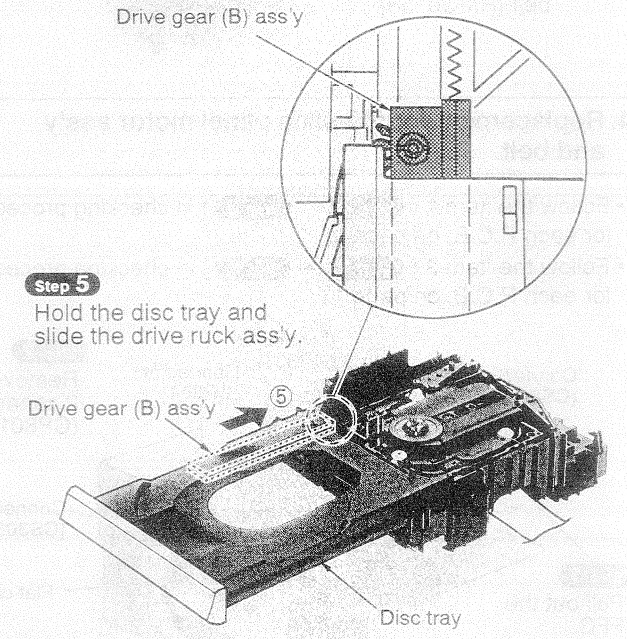
Step 1 Release the lock lever.

Step 2 Operate the lever, and then locate the traverse deck to "UP" position.

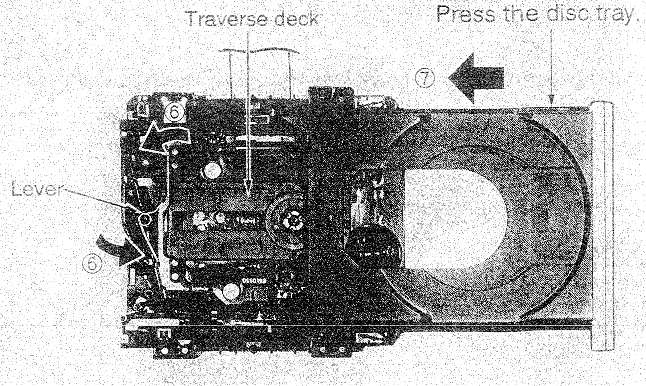

Claw
③
④
Claw

Step 3 Move the drive ruck ass'y in the derection of arrow ③.

Step 4 Install the disc tray.


Drive gear (B) ass'y
Drive gear (B) ass'y
⑤
Disc tray

Step 5 Hold the disc tray and slide the drive ruck ass'y.

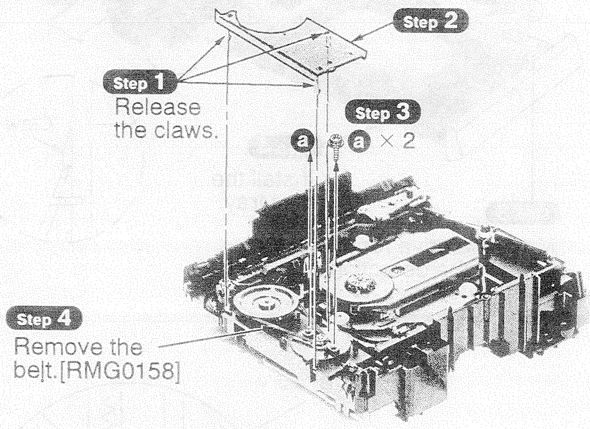

Traverse deck
⑦
⑥
Lever
⑥

Step 6 Operate the lever, and then locate the traverse deck to "DOWN" position.

Step 7 Press the disc tray.

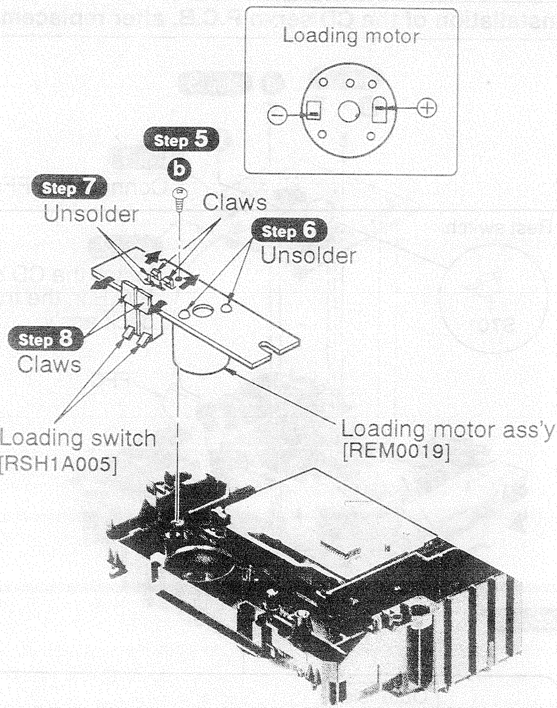
3. Replacement for the belt, loading motor ass'y and loading switch

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (**Step 1** ~ **Step 7**) in checking procedures for each P.C.B. on page 11.
- Follow the item 2 (**Step 1** ~ **Step 8**) in main component replacement procedures on pages 13 and 14.


Step 2
Step 3
ⓐ
ⓐ × 2

Step 1 Release the claws.

Step 4 Remove the belt.[RMG0158]

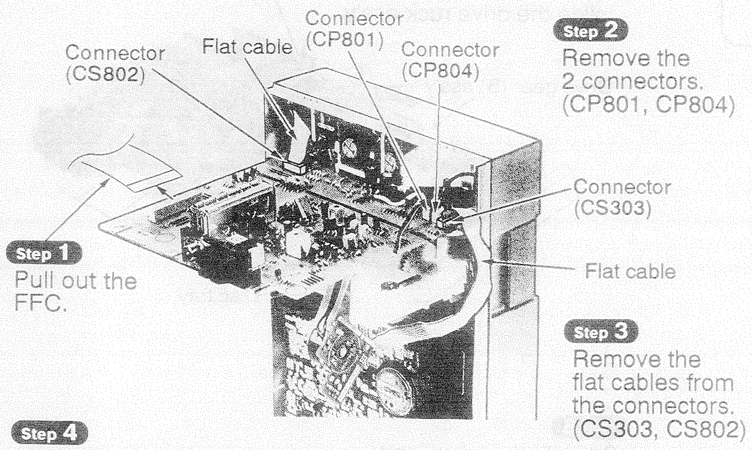

Loading motor
⊖
⊕
Step 5
ⓑ
Claws
Step 8
Claws
Loading switch
[RSH1A005]
Loading motor ass'y
[REM0019]

Step 7 Unsolder

Step 6 Unsolder

4. Replacement for the slide panel motor ass'y and belt.

- Follow the item 1 (**Step 1** ~ **Step 3**) in checking procedures for each P.C.B. on page 9.
- Follow the item 3 (**Step 1** ~ **Step 5**) in checking procedures for each P.C.B. on page 11.

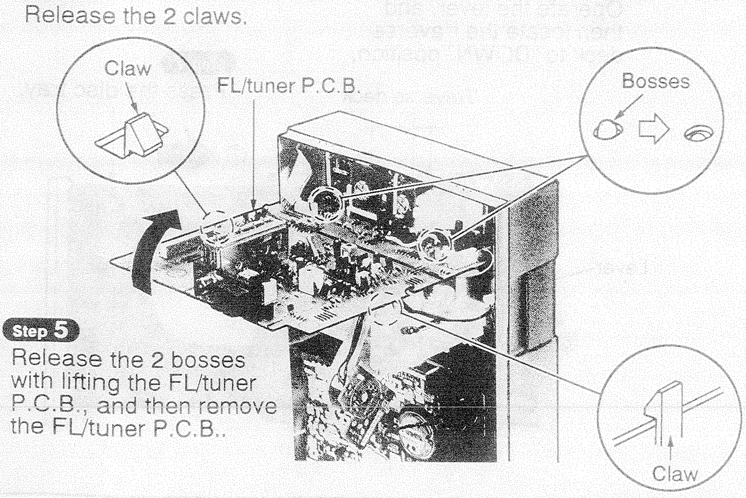

Connector
(CS802)
Flat cable
Connector
(CP801)
Connector
(CP804)
Connector
(CS303)
Flat cable

Step 1 Pull out the FFC.

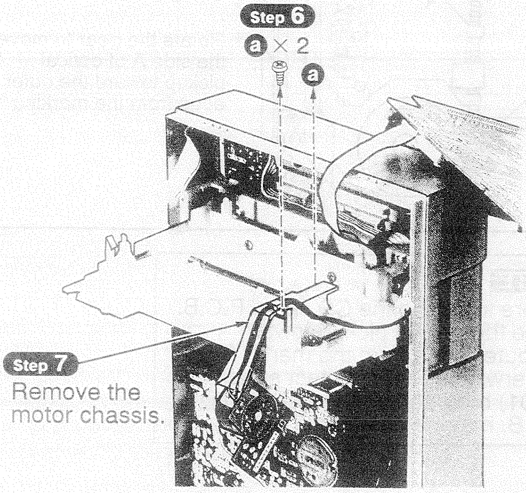
Step 2 Remove the 2 connectors. (CP801, CP804)

Step 3 Remove the flat cables from the connectors. (CS303, CS802)

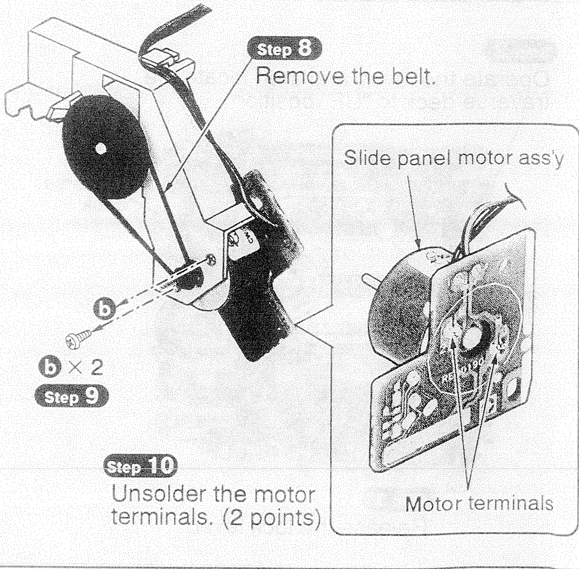
Step 4 Release the 2 claws.


Claw
FL/tuner P.C.B.
Bosses
Claw

Step 5 Release the 2 bosses with lifting the FL/tuner P.C.B., and then remove the FL/tuner P.C.B..



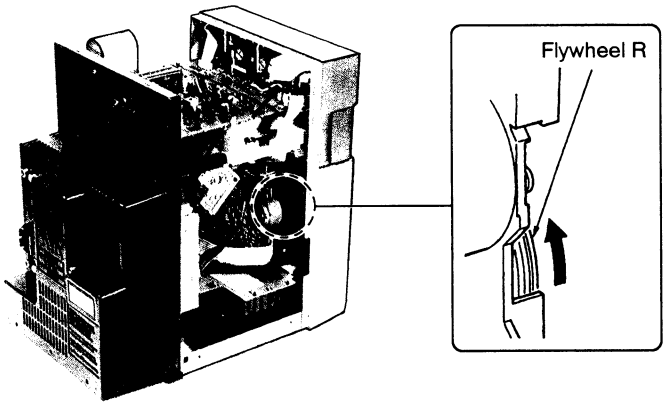
Step 7 Remove the motor chassis.


ⓑ
ⓑ × 2
Step 9
Slide panel motor ass'y
Motor terminals

Step 8 Remove the belt.

Step 10 Unsolder the motor terminals. (2 points)

Measure for tape trouble



- If a cassette tape cannot be removed from the deck since the tape is caught by the capstan or pinch roller during playback or recording, rotate the flywheel R in the direction of the arrow to remove the tape.

■ Schematic Diagram

Page
A CD SERVO CIRCUIT 19, 20
B MECHANISM CONTROL CIRCUIT 21, 22
C MECHANISM CIRCUIT 21
D FL/TUNER CIRCUIT .... 23 – 26
E MOTOR (SLIDE PANEL) CIRCUIT 26
F LAMP CIRCUIT 26
G OPERATION (1) CIRCUIT 26
H OPERATION (2) CIRCUIT 26
F
I OPERATION (3) CIRCUIT ....
J VOLUME CIRCUIT ....
K OPERATION (4) CIRCUIT ....
L OPERATION (5) CIRCUIT ....
M OPERATION (6) CIRCUIT ....
N LOADING MOTOR CIRCUIT ....
O MAIN CIRCUIT 27
P POWER SUPPLY CIRCUIT ....

- **This schematic diagram may be modified at any time with the development of new technology.**

• S701	: CD rest switch.
• S790	: CD tray open detect switch.
• S791	: CD tray close detect switch.
• S801	: Tuner/band select switch. (TUNER/BAND)
• S802	: Tuning mode select switch. (TUNE MODE)
• S803	: Memory/set switch. (MEMORY/SET)
• S804	: Record/record pause switch. (●/●❚❚ REC/REC PAUSE)
• S805	: Rewind TPS switch. (REW/TPS)
• S806	: Fast forward switch. (FF/TPS)
• S807	: AUX switch. (AUX)
• S808	: Cassette stop switch. (■)
• S809	: Cassette play/direction switch. (◀ ▶)
• S810	: Cassette holder open switch. (⏏)
• S811	: Tuning/time adjust switch. (TUNE/TIME ADJ DOWN/–)
• S812	: Tuning/time adjust switch. (TUNE/TIME ADJ UP/ +)
• S813	: Glide panel open/close switch. (OPEN/CLOSE)
• S814	: Clock/timer switch. (CLOCK/TIMER)
• S815	: Play timer/record timer switch. (⏲ PLAY/⏲ REC)
• S816	: Power switch. (POWER)
• S817	: CD edit switch. (CD EDIT)
• S818	: Skip/search switch. (⏮ SKIP)
• S819	: Skip/search switch. (⏭ SKIP)
• S820	: CD stop switch. (■ STOP)
• S821	: CD play/pause switch. (▶/❚❚ PLAY/PAUSE)
• S822	: CD tray open/close switch. (⏏/CLOSE)
• S971	: Deck mode detect switch.
• S972	: Deck half detect switch.
• S973	: Deck CrO₂ tape detect switch.
• S974	: Deck reverse side record prevention tab detect switch.
• S975	: Deck forward side record prevention tab detect switch.
• VR801	: Volume control encoder. (VOLUME)
• VR802	: Bass control VR. (BASS)
• VR803	: Treble control VR. (TREBLE)

- Indicated voltage values are the standard values for the measured by the DC electronic circuit tester (high-impedance) the chassis taken as standard. Therefore, there may exist s errors in the voltage values, depending on the internal impedanc the DC circuit tester.

  No mark ... CD STOP
  (   )....... CD PLAYBACK (1kHz, L+R, 0dB)
  <   >....... FM
  ┌   ┘ ...... AM
  ((   )) .... DECK PLAYBACK
  〈   〉 ...... DECK RECORDING

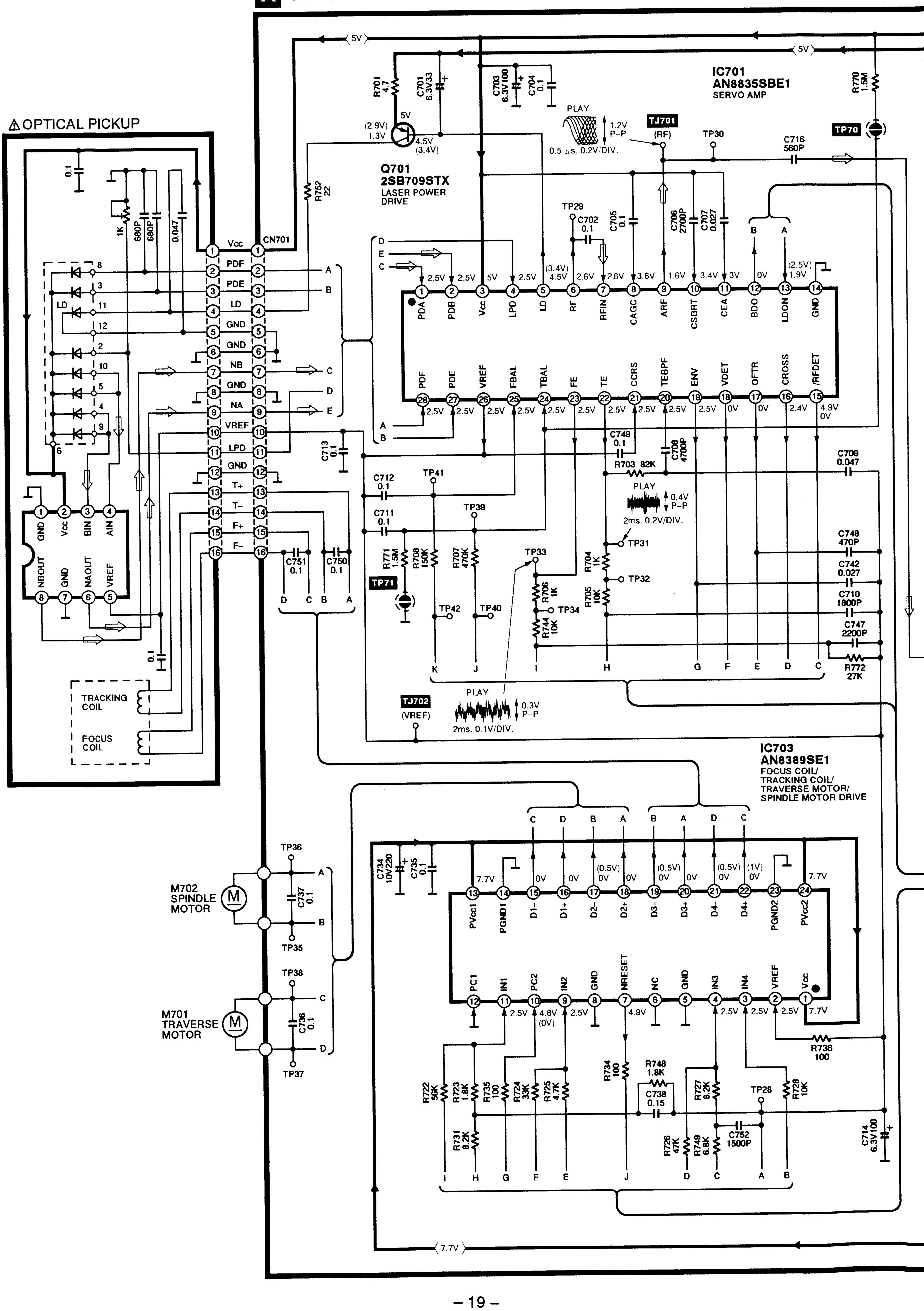
- Important safety notice:
  Components identified by ⚠ mark have special characteristics important for safety.
  Furthermore, special parts which have purposes of fire-retardan (resistors), high-quality sound (capacitors), low-noise (resistors) etc. are used. When replacing any of components, be sure to us only manufacturer's specified parts shown in the parts list.

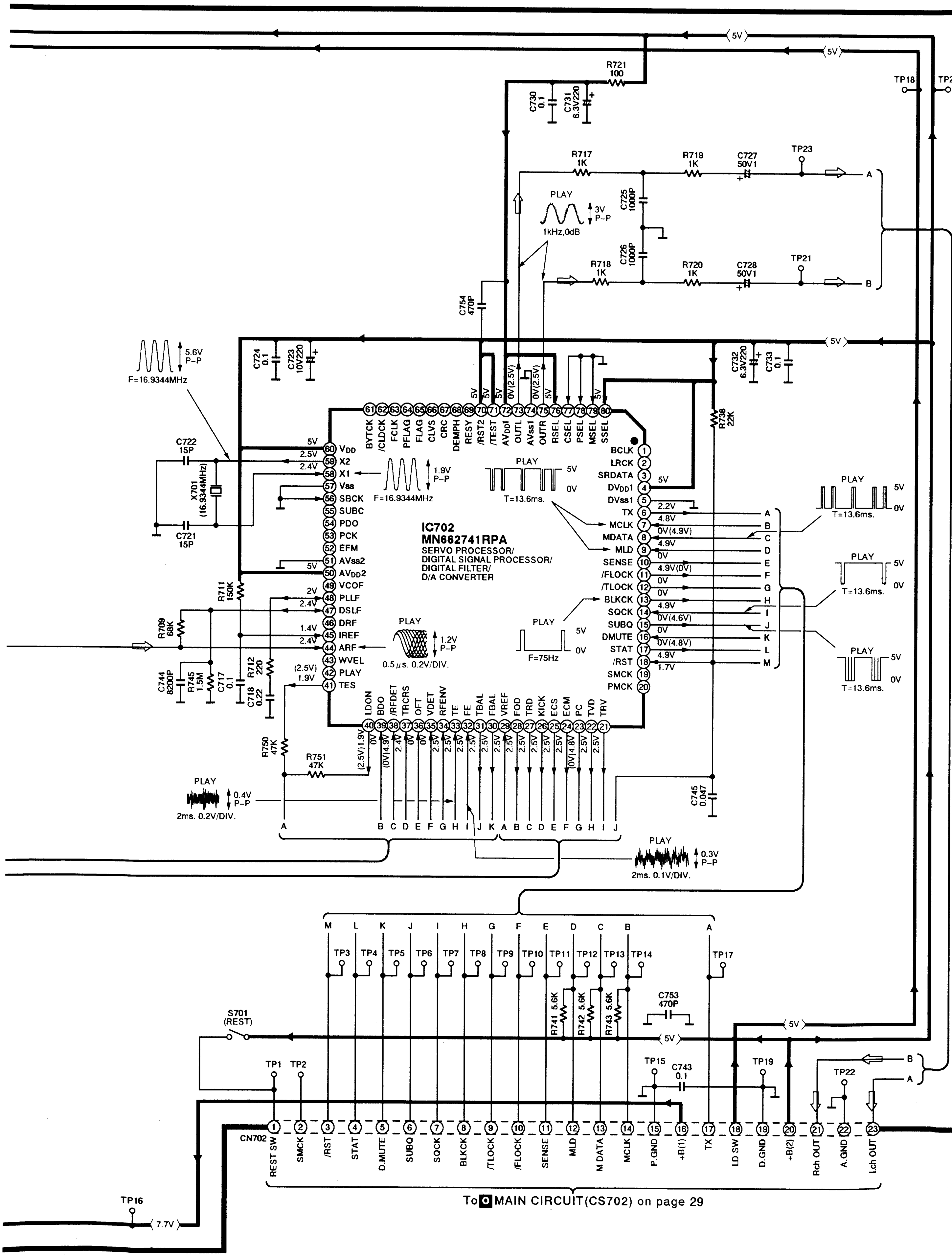
- **Caution!**
  IC and LSI are sensitive to static electricity.
  Secondary trouble can be prevented by taking care during repai
  Cover the parts boxes made of plastics with aluminum foil.
  Ground the soldering iron.
  Put a conductive mat on the work table.
  Do not touch the legs of IC or LSI with the fingers directly.

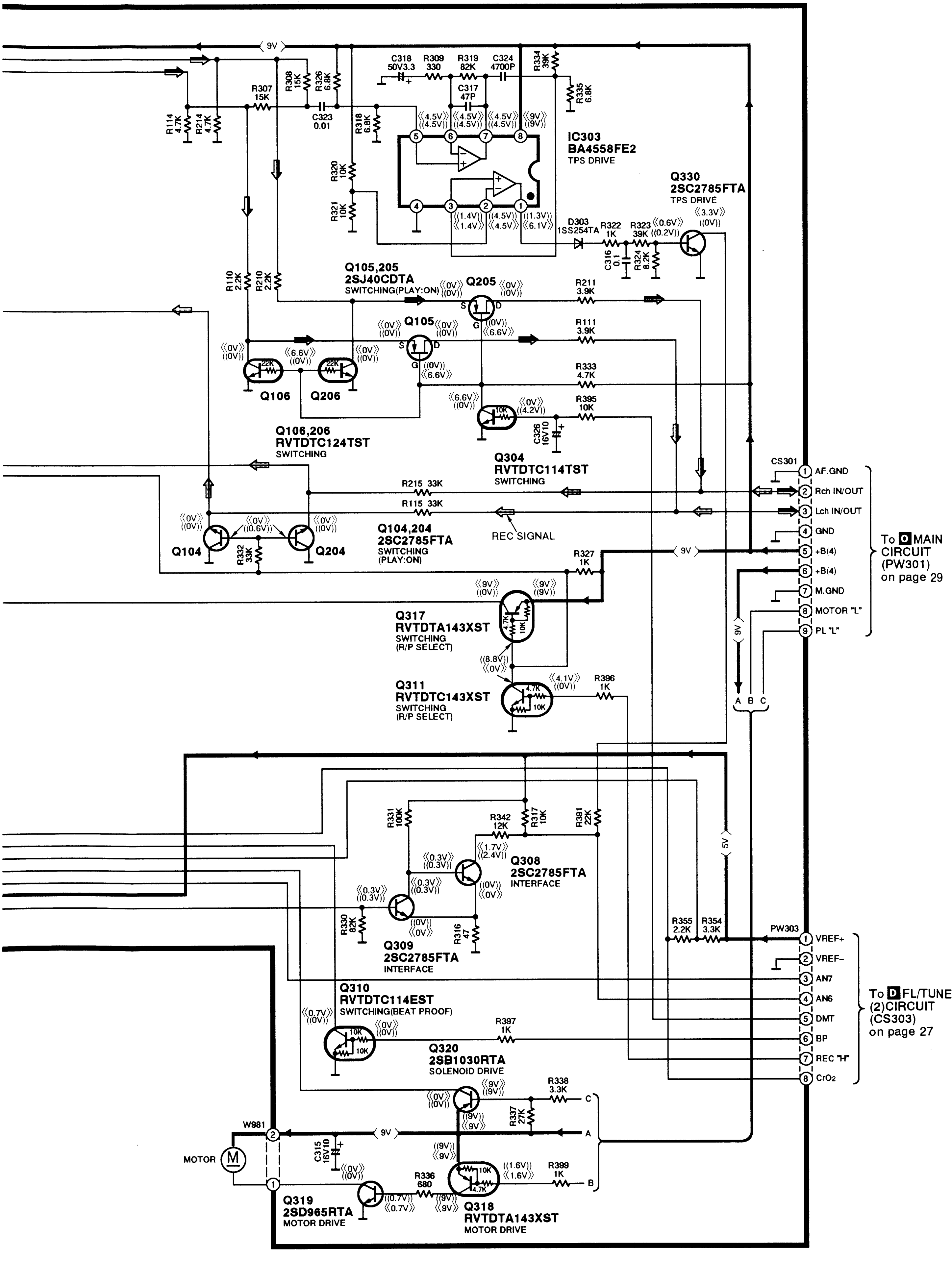
- Signal Line

⇨ :	CD Signal Line
▤➡ :	FM Signal Line
□□□▷ :	FM OSC Signal Line
➡ :	AM OSC Signal Line
■■■▶ :	AM OSC SIGNAL Line
⇒ :	Tape Playback Signal Line
▒⇨ :	Tape Recording Signal Line

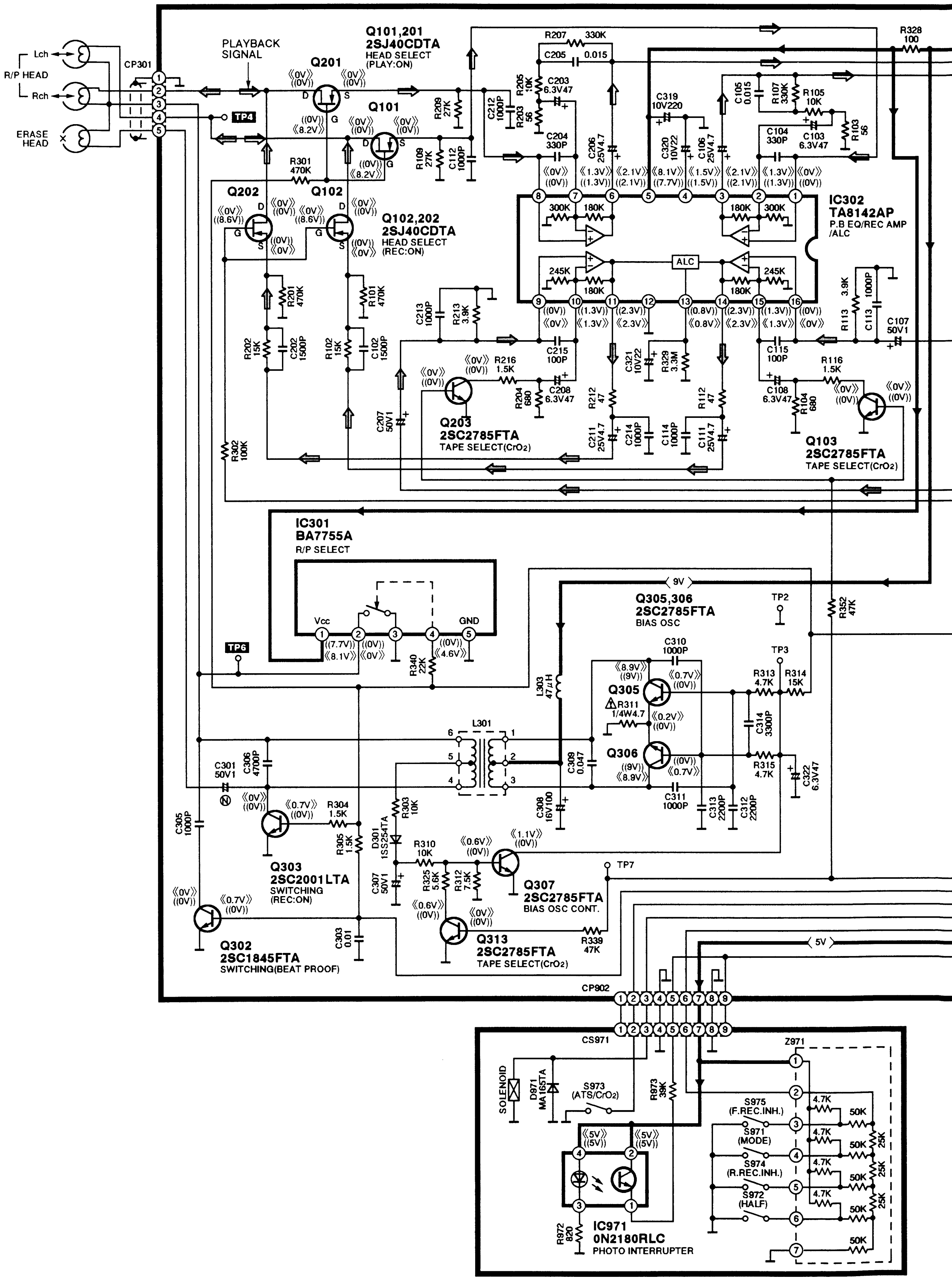
A CD SERVO CIRCUIT (P.C.Board:on page 33)


⚠OPTICAL PICKUP
IC701
AN8835SBE1
SERVO AMP
Q701
2SB709STX
LASER POWER DRIVE
CN701
IC703
AN8389SE1
FOCUS COIL/
TRACKING COIL/
TRAVERSE MOTOR/
SPINDLE MOTOR DRIVE
M702
SPINDLE
MOTOR
M701
TRAVERSE
MOTOR
TRACKING COIL
FOCUS COIL
TJ701
(RF)
TJ702
(VREF)
TP70
TP71
TP28
TP29
TP30
TP31
TP32
TP33
TP34
TP35
TP36
TP37
TP38
TP39
TP40
TP41
TP42
PLAY
1.2V P-P
0.5 µs. 0.2V/DIV.
0.4V P-P
2ms. 0.2V/DIV.
0.3V P-P
2ms. 0.1V/DIV.
5V
7.7V
Vcc
PDF
PDE
LD
GND
NB
NA
VREF
LPD
T+
T−
F+
F−
NBOUT
NAOUT
BIN
AIN
PDA
PDB
LPD
RF
RFIN
CAGC
ARF
CSBRT
CEA
BDO
LDON
FBAL
TBAL
FE
TE
CCRS
TEBPF
ENV
VDET
OFTR
CROSS
/RFDET
PVcc1
PGND1
D1−
D1+
D2−
D2+
D3−
D3+
D4−
D4+
PGND2
PVcc2
PC1
IN1
PC2
IN2
NRESET
NC
IN3
IN4
R701 4.7
C701 6.3V33
C703 6.3V100
C704 0.1
R752 22
R770 1.5M
C716 560P
C702 0.1
C705 0.1
C706 2700P
C707 0.027
C713 0.1
C712 0.1
C711 0.1
R771 1.5M
R708 150K
R707 470K
R706 1K
R744 10K
R704 1K
R705 10K
C749 0.1
C708 4700P
R703 82K
C709 0.047
C748 470P
C742 0.027
C710 1800P
C747 2200P
R772 27K
C751 0.1
C750 0.1
C734 10V220
C735 0.1
C737 0.1
C736 0.1
R736 100
R722 56K
R723 1.8K
R735 100
R724 33K
R725 4.7K
R734 100
R748 1.8K
C738 0.15
R727 8.2K
R728 10K
R731 8.2K
R726 47K
R749 6.8K
C752 1500P
C714 6.3V100
1K
680P
0.047
0.1
(2.9V) 1.3V
4.5V (3.4V)
(3.4V) 4.5V
(2.5V) 1.9V
4.9V 0V
4.8V (0V)
(0.5V)
(1V)


IC702
MN662741RPA
SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/
D/A CONVERTER
R721 100
C730 0.1
C731 6.3V220
R717 1K
R719 1K
C727 50V1
TP23
C725 1000P
C726 1000P
R718 1K
R720 1K
C728 50V1
TP21
TP18
PLAY 3V P-P 1kHz,0dB
C754 470P
C724 0.1
C723 10V220
C732 6.3V220
C733 0.1
R738 22K
5.6V P-P F=16.9344MHz
C722 15P
X701 (16.9344MHz)
C721 15P
1.9V P-P F=16.9344MHz
PLAY 5V 0V T=13.6ms.
R711 150K
R709 68K
C744 8200P
R745 1.5M
C717 0.1
R712 220
C718 0.22
PLAY 1.2V P-P 0.5µs. 0.2V/DIV.
PLAY 5V 0V F=75Hz
R750 47K
R751 47K
PLAY 0.4V P-P 2ms. 0.2V/DIV.
PLAY 0.3V P-P 2ms. 0.1V/DIV.
C745 0.047
BCLK LRCK SRDATA DVDD1 DVss1 TX MCLK MDATA MLD SENSE /FLOCK /TLOCK BLKCK SQCK SUBQ DMUTE STAT /RST SMCK PMCK
VDD X2 X1 Vss SBCK SUBC PDO PCK EFM AVss2 AVDD2 VCOF PLLF DSLF DRF IREF ARF WVEL PLAY TES
LDON BDO /RFDET TRCRS OFT VDET RFENV TE FE TBAL FBAL VREF FOD TRD KICK ECS ECM PC TVD TRV
BYTCK /CLDCK FCLK PFLAG FLAG CLVS CRC DEMPH RESY /RST2 /TEST AVDD1 OUTL AVss1 OUTR RSEL CSEL PSEL MSEL SSEL
TP3 TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP12 TP13 TP14 TP17
R741 5.6K R742 5.6K R743 5.6K
C753 470P
S701 (REST)
TP1 TP2 TP15 C743 0.1 TP19 TP22 TP16 7.7V 5V
CN702
REST SW SMCK /RST STAT D.MUTE SUBQ SOCK BLKCK /TLOCK /FLOCK SENSE MLD M DATA MCLK P.GND +B(1) TX LD SW D.GND +B(2) Rch OUT A.GND Lch OUT
To O MAIN CIRCUIT(CS702) on page 29


9V
C318 50V3.3
R309 330
R319 82K
C324 4700P
R334 39K
R335 6.8K
C317 47P
R307 15K
R308 15K
R326 6.8K
C323 0.01
R318 6.8K
R114 4.7K
R214 4.7K
《4.5V》 ((4.5V))
《9V》 ((9V))
IC303
BA4558FE2
TPS DRIVE
R320 10K
R321 10K
《1.4V》 ((1.4V))
《4.5V》 ((4.5V))
《1.3V》 ((6.1V))
Q330
2SC2785FTA
TPS DRIVE
《3.3V》 ((0V))
D303 1SS254TA
R322 1K
R323 39K
《0.6V》 ((0.2V))
C316 0.1
R324 8.2K
R110 2.2K
R210 2.2K
Q105,205
2SJ40CDTA
SWITCHING(PLAY:ON)
Q205
Q105
R211 3.9K
R111 3.9K
R333 4.7K
R395 10K
《6.6V》 ((0V))
《0V》 ((4.2V))
C326 16V10
Q106
Q206
Q106,206
RVTDTC124TST
SWITCHING
Q304
RVTDTC114TST
SWITCHING
R215 33K
R115 33K
REC SIGNAL
Q104
Q204
R332 33K
《0V》 ((0.6V))
Q104,204
2SC2785FTA
SWITCHING
(PLAY:ON)
R327 1K
CS301
① AF.GND
② Rch IN/OUT
③ Lch IN/OUT
④ GND
⑤ +B(4)
⑥ +B(4)
⑦ M.GND
⑧ MOTOR "L"
⑨ PL "L"
To O MAIN CIRCUIT (PW301) on page 29
Q317
RVTDTA143XST
SWITCHING
(R/P SELECT)
((8.8V)) 《0V》
Q311
RVTDTC143XST
SWITCHING
(R/P SELECT)
《4.1V》 ((0V))
R396 1K
A B C
R331 100K
R317 10K
R391 22K
R342 12K
5V
Q308
2SC2785FTA
INTERFACE
《1.7V》 ((2.4V))
《0.3V》 ((0.3V))
R330 82K
R316 47
Q309
2SC2785FTA
INTERFACE
R355 2.2K
R354 3.3K
PW303
① VREF+
② VREF−
③ AN7
④ AN6
⑤ DMT
⑥ BP
⑦ REC "H"
⑧ CrO2
To D FL/TUNE (2)CIRCUIT (CS303) on page 27
Q310
RVTDTC114EST
SWITCHING(BEAT PROOF)
《0.7V》 ((0V))
R397 1K
Q320
2SB1030RTA
SOLENOID DRIVE
R338 3.3K
R337 27K
《9V》 ((9V))
W981
MOTOR
M
C315 16V10
R336 680
R399 1K
((1.6V)) 《1.6V》
((0.7V)) 《0.7V》
Q319
2SD965RTA
MOTOR DRIVE
Q318
RVTDTA143XST
MOTOR DRIVE

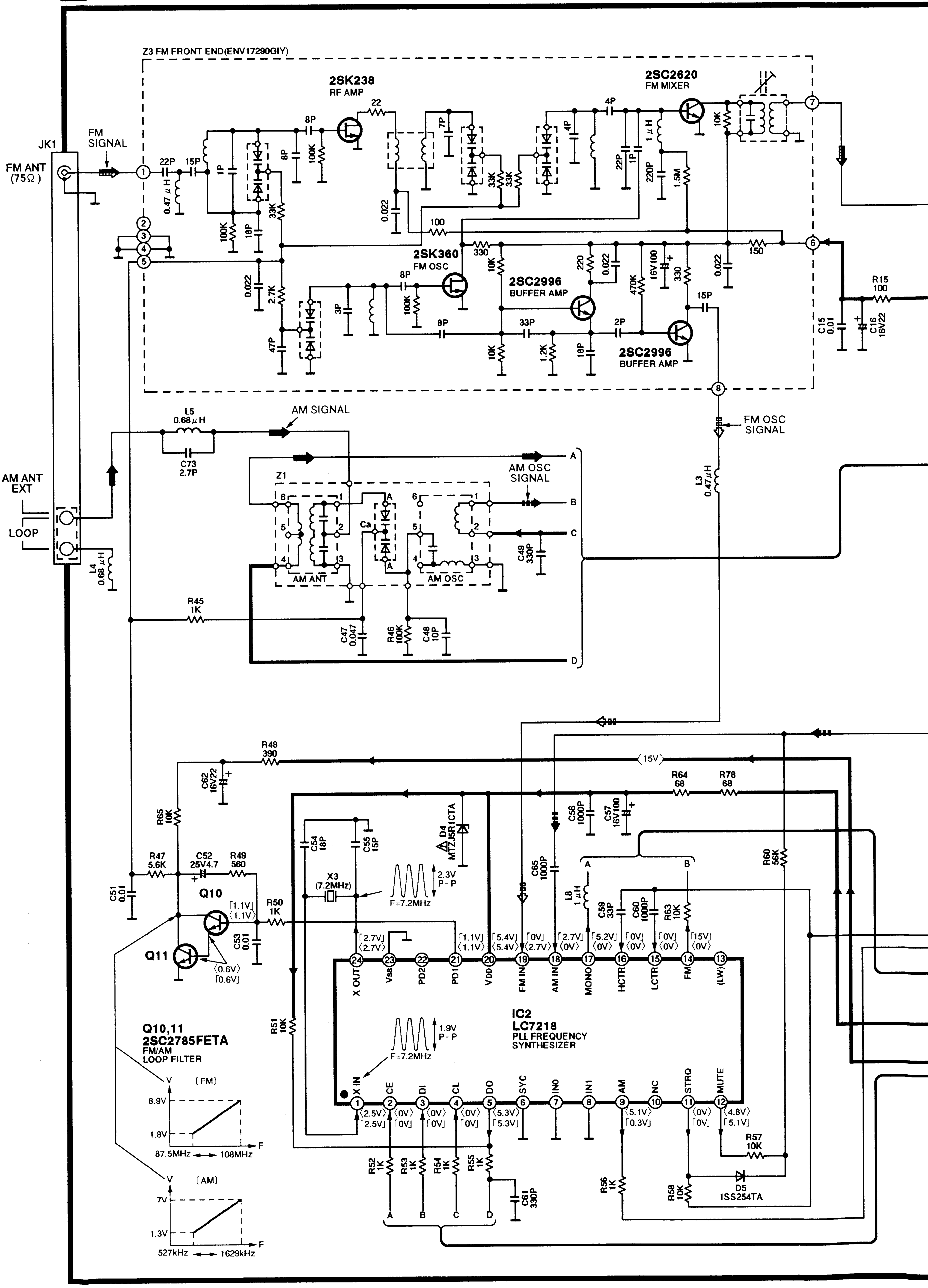
B MECHANISM CONTROL CIRCUIT (P.C.Board:on page 33)

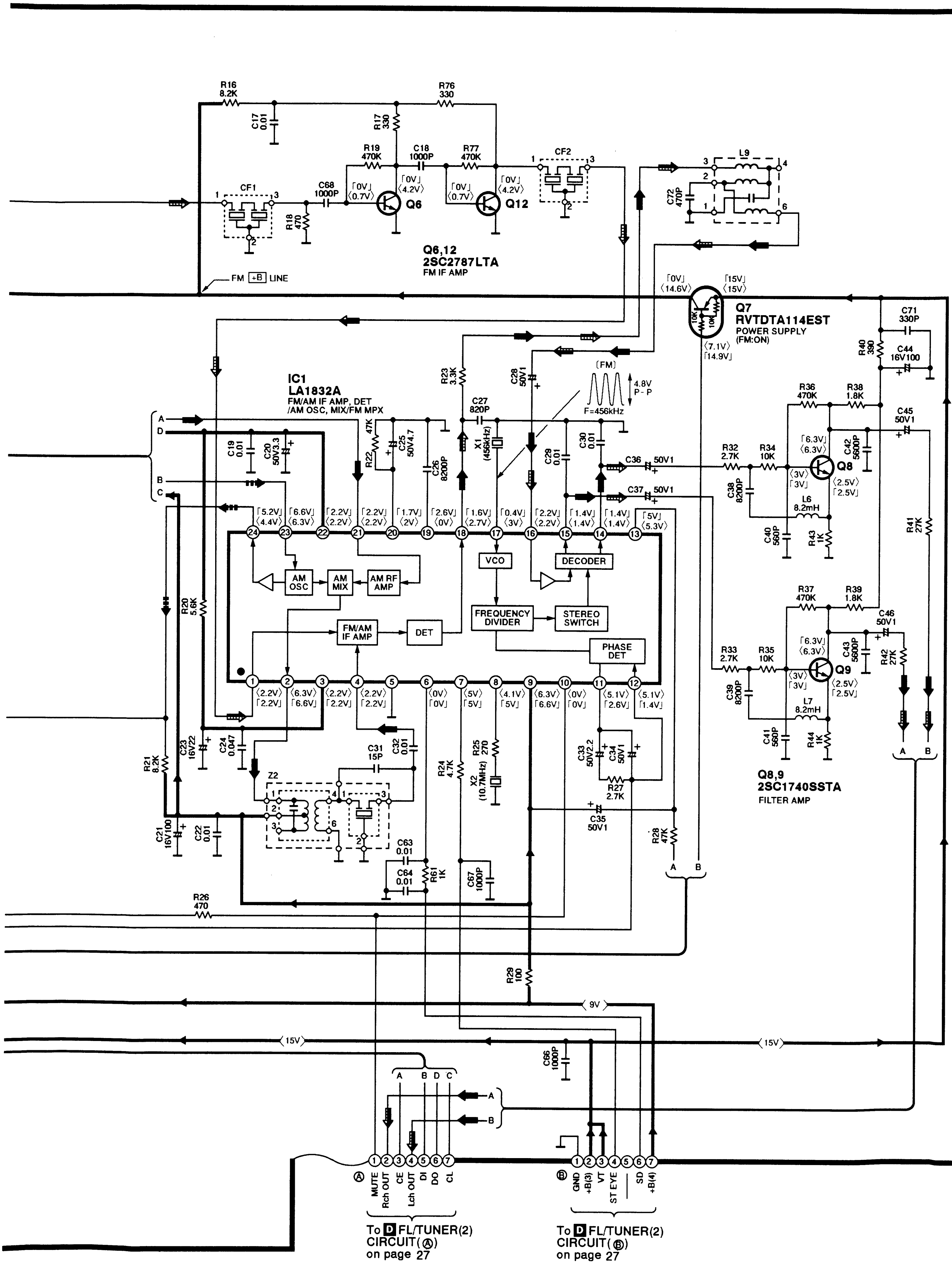


R/P HEAD
Lch
Rch
ERASE HEAD
CP301
PLAYBACK SIGNAL
TP4
TP6
TP2
TP3
TP7
Q101,201
2SJ40CDTA
HEAD SELECT
(PLAY:ON)
Q201
Q101
Q202
Q102
Q102,202
2SJ40CDTA
HEAD SELECT
(REC:ON)
R301 470K
R201 470K
R101 470K
R202 15K
C202 1500P
R102 15K
C102 1500P
R302 100K
R209 27K
R109 27K
C112 1000P
C212 1000P
R207 330K
C205 0.015
R205 10K
R203 56
C203 6.3V47
C204 330P
C206 25V4.7
C319 10V220
C320 10V22
C106 25V4.7
C105 0.015
R107 330K
R105 10K
R103 56
C104 330P
C103 6.3V47
R328 100
IC302
TA8142AP
P.B EQ/REC AMP /ALC
ALC
300K
180K
245K
C213 1000P
R213 3.9K
C215 100P
R216 1.5K
C208 6.3V47
R204 680
Q203
2SC2785FTA
TAPE SELECT(CrO2)
C207 50V1
R212 47
C211 25V4.7
C214 1000P
C321 10V22
R329 3.3M
C114 1000P
R112 47
C111 25V4.7
C115 100P
R116 1.5K
C108 6.3V47
R104 680
Q103
2SC2785FTA
TAPE SELECT(CrO2)
R113 3.9K
C113 1000P
C107 50V1
IC301
BA7755A
R/P SELECT
Vcc
GND
R340 22K
9V
Q305,306
2SC2785FTA
BIAS OSC
R352 47K
C310 1000P
Q305
⚠R311 1/4W4.7
Q306
C311 1000P
R313 4.7K
R314 15K
C314 3300P
R315 4.7K
C322 6.3V47
C313 2200P
C312 2200P
L303 47μH
L301
C309 0.047
C308 16V100
C301 50V1
C306 4700P
C305 1000P
Q303
2SC2001LTA
SWITCHING
(REC:ON)
R304 1.5K
R305 1.5K
R303 10K
D301 1SS254TA
R310 10K
C307 50V1
R325 5.6K
R312 7.5K
Q307
2SC2785FTA
BIAS OSC CONT.
Q302
2SC1845FTA
SWITCHING(BEAT PROOF)
C303 0.01
Q313
2SC2785FTA
TAPE SELECT(CrO2)
R339 47K
5V
CP902
CS971
Z971
SOLENOID
D971 MA165TA
S973 (ATS/CrO2)
R973 39K
S975 (F.REC.INH.)
S971 (MODE)
S974 (R.REC.INH.)
S972 (HALF)
4.7K
50K
25K
IC971
ON2180RLC
PHOTO INTERRUPTER
R972 820

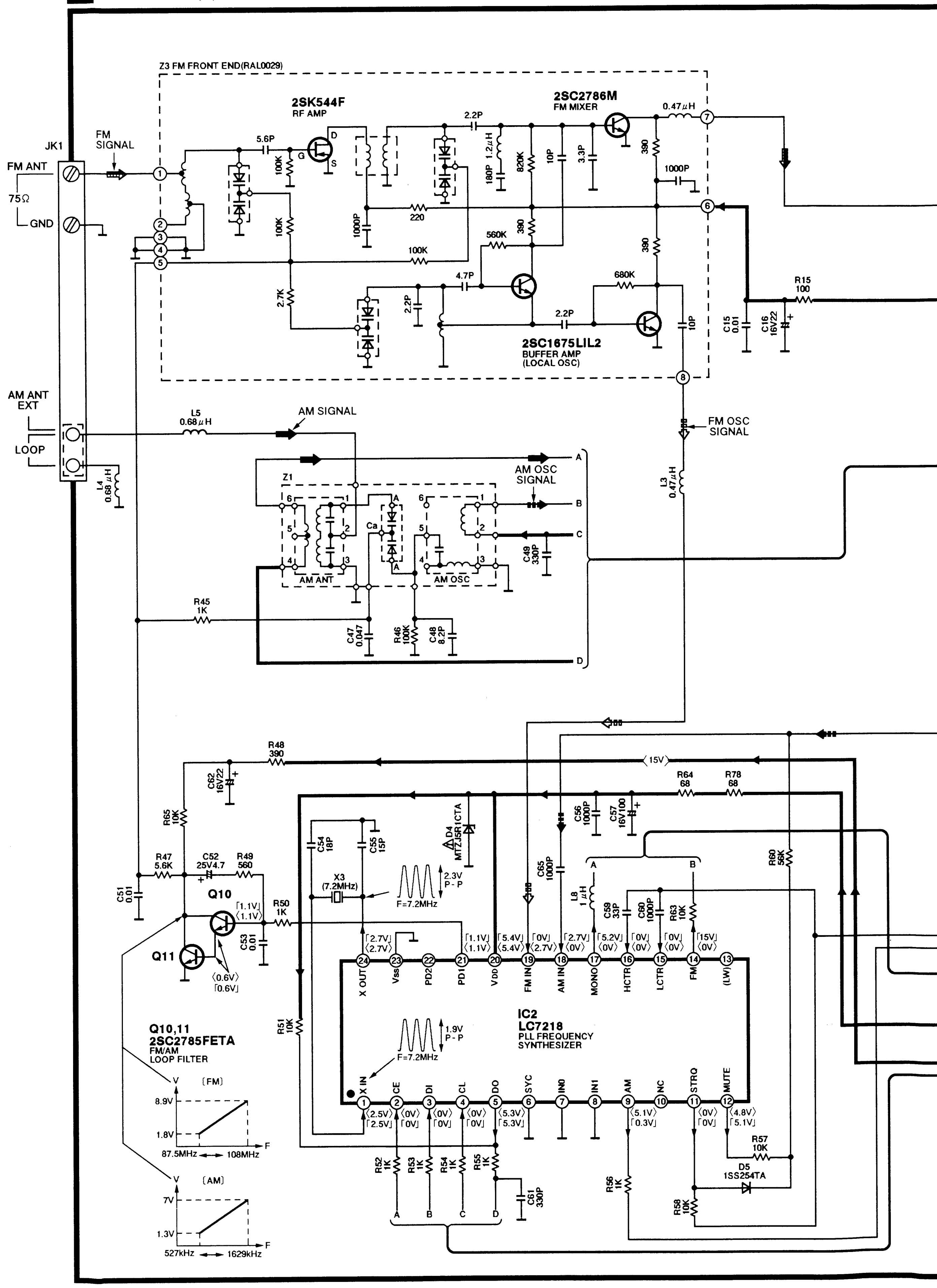
C MECHANISM CIRCUIT (P.C.Board:on page 34)

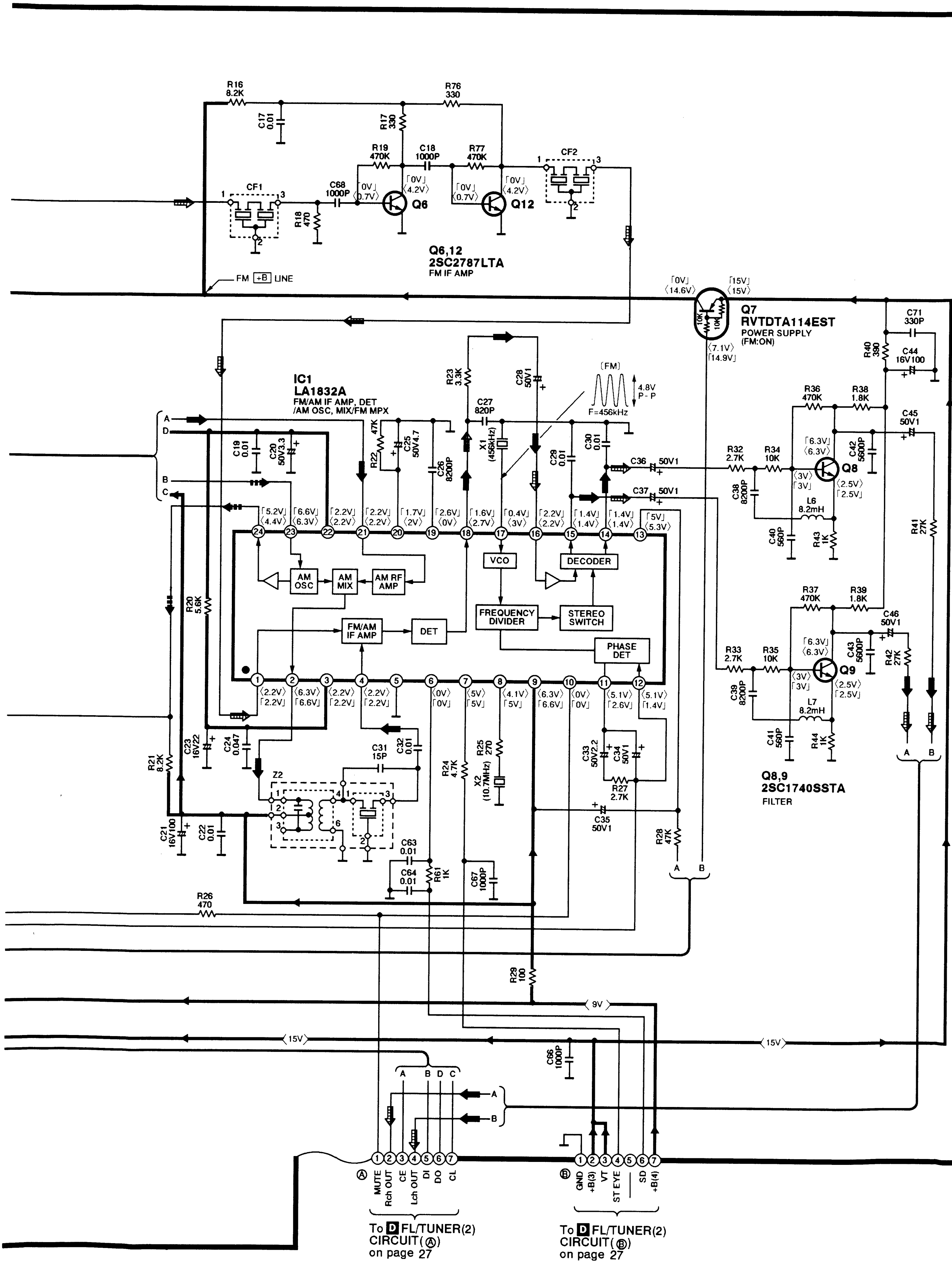
D FL/TUNER(1) CIRCUIT For [E,EB,EG] areas. (P.C.Board:on page 34)


Z3 FM FRONT END(ENV17290GIY)
2SK238
RF AMP
2SC2620
FM MIXER
2SK360
FM OSC
2SC2996
BUFFER AMP
2SC2996
BUFFER AMP
JK1
FM ANT
(75Ω)
FM
SIGNAL
22P
15P
0.47 μH
1P
8P
100K
18P
33K
0.022
2.7K
47P
3P
22
7P
100
330
10K
220
0.022
470K
16V100
330
0.022
150
4P
4P
22P
1P
220P
1 μH
1.5M
10K
2P
15P
33P
1.2K
18P
R15
100
C15
0.01
C16
16V22
FM OSC
SIGNAL
L3
0.47μH
L5
0.68μH
C73
2.7P
AM SIGNAL
AM OSC
SIGNAL
AM ANT
EXT
LOOP
L4
0.68 μH
Z1
Ca
AM ANT
AM OSC
C49
330P
R45
1K
C47
0.047
R46
100K
C48
10P
A
B
C
D
R48
390
C62
16V22
(15V)
R64
68
R78
68
R65
10K
R47
5.6K
C52
25V4.7
R49
560
C51
0.01
Q10
Q11
R50
1K
C53
0.01
[1.1V]
(1.1V)
(0.6V)
[0.6V]
C54
18P
C55
15P
X3
(7.2MHz)
2.3V
P-P
F=7.2MHz
D4
MTZJ5R1CTA
C56
1000P
C57
16V100
C65
1000P
L8
1 μH
C59
33P
C60
1000P
R63
10K
R60
56K
[2.7V]
(2.7V)
[1.1V]
(1.1V)
[5.4V]
(5.4V)
[0V]
(2.7V)
[2.7V]
(0V)
[5.2V]
(0V)
[0V]
(0V)
[0V]
(0V)
[15V]
(0V)
X OUT
Vss
PD2
PD1
VDD
FM IN
AM IN
MONO
HCTR
LCTR
FM
(LW)
IC2
LC7218
PLL FREQUENCY
SYNTHESIZER
1.9V
P-P
F=7.2MHz
R51
10K
X IN
CE
DI
CL
DO
SYC
IN0
IN1
AM
NC
STRQ
MUTE
(2.5V)
[2.5V]
(0V)
[0V]
(0V)
[0V]
(0V)
[0V]
(5.3V)
[5.3V]
(5.1V)
[0.3V]
(0V)
[0V]
(4.8V)
[5.1V]
R57
10K
D5
1SS254TA
R52
1K
R53
1K
R54
1K
R55
1K
C61
330P
R56
1K
R58
10K
Q10,11
2SC2785FETA
FM/AM
LOOP FILTER
V
[FM]
8.9V
1.8V
F
87.5MHz
108MHz
V
[AM]
7V
1.3V
F
527kHz
1629kHz

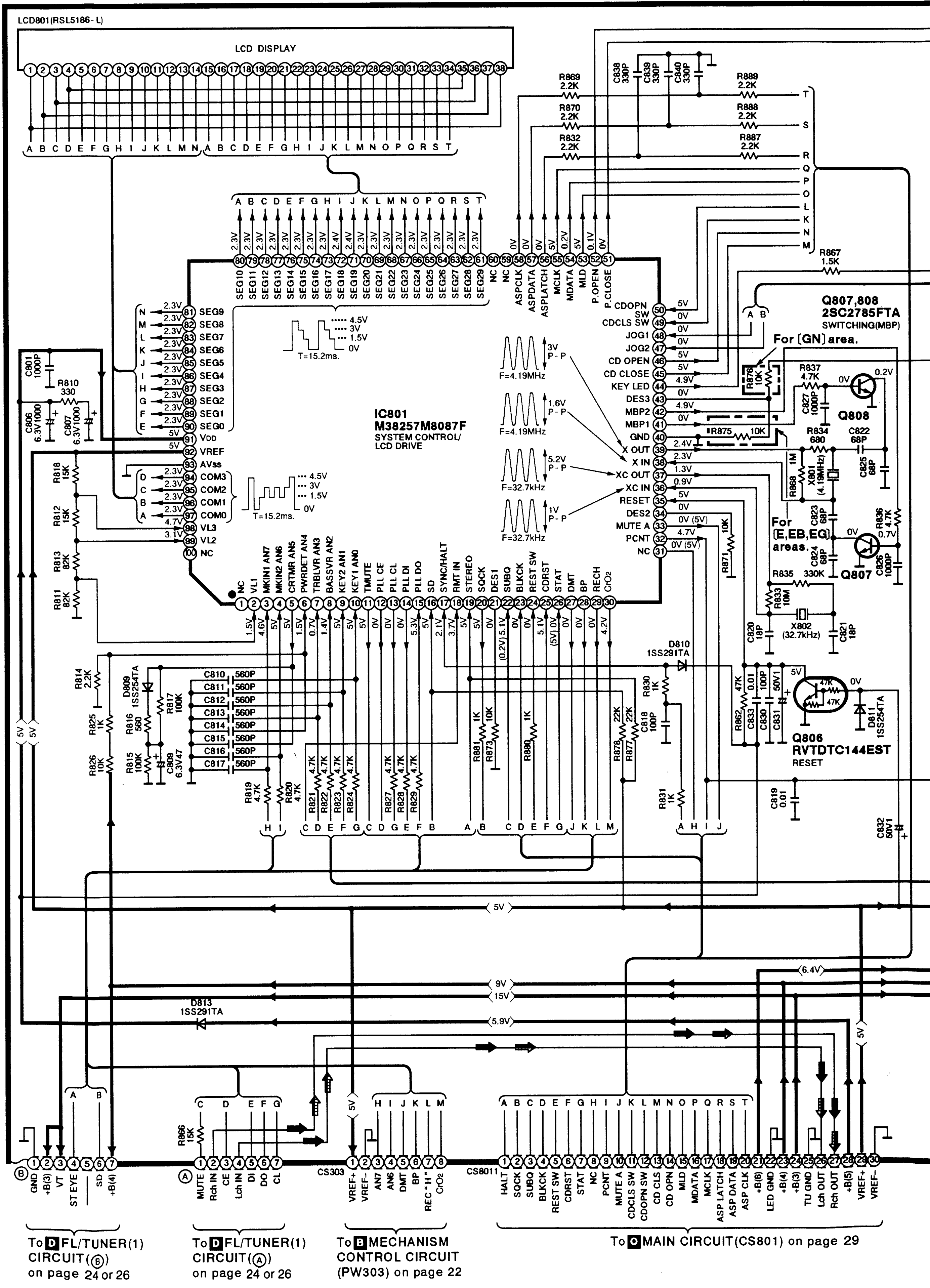

R16 8.2K
C17 0.01
R17 330
R76 330
R19 470K
C18 1000P
R77 470K
CF1
CF2
C68 1000P
R18 470
Q6
Q12
Q6,12
2SC2787LTA
FM IF AMP
FM +B LINE
L9
C72 470P
Q7
RVTDTA114EST
POWER SUPPLY
(FM:ON)
C71 330P
R40 390
C44 16V100
IC1
LA1832A
FM/AM IF AMP, DET
/AM OSC, MIX/FM MPX
R23 3.3K
C28 50V1
C27 820P
R22 47K
C25 50V4.7
C26 8200P
X1 (456kHz)
C29 0.01
C30 0.01
(FM)
4.8V P-P
F=456kHz
C19 0.01
C20 50V3.3
C36 50V1
C37 50V1
R36 470K
R38 1.8K
C45 50V1
R32 2.7K
R34 10K
C42 5600P
Q8
C38 8200P
L6 8.2mH
C40 560P
R43 1K
R41 27K
AM OSC
AM MIX
AM RF AMP
VCO
DECODER
FREQUENCY DIVIDER
STEREO SWITCH
FM/AM IF AMP
DET
PHASE DET
R20 5.6K
R37 470K
R39 1.8K
C46 50V1
R33 2.7K
R35 10K
C43 5600P
R42 27K
Q9
C39 8200P
L7 8.2mH
C41 560P
R44 1K
Q8,9
2SC1740SSTA
FILTER AMP
C23 16V22
C24 0.047
C31 15P
C32 0.01
R24 4.7K
R25 270
X2 (10.7MHz)
C33 50V2.2
C34 50V1
R27 2.7K
C35 50V1
R28 47K
R21 8.2K
C21 16V100
C22 0.01
Z2
C63 0.01
C64 0.01
R61 1K
C67 1000P
R26 470
R29 100
9V
15V
C66 1000P
MUTE
Rch OUT
CE
Lch OUT
DI
DO
CL
GND
+B(3)
VT
ST EYE
SD
+B(4)
To D FL/TUNER(2) CIRCUIT(A) on page 27
To D FL/TUNER(2) CIRCUIT(B) on page 27

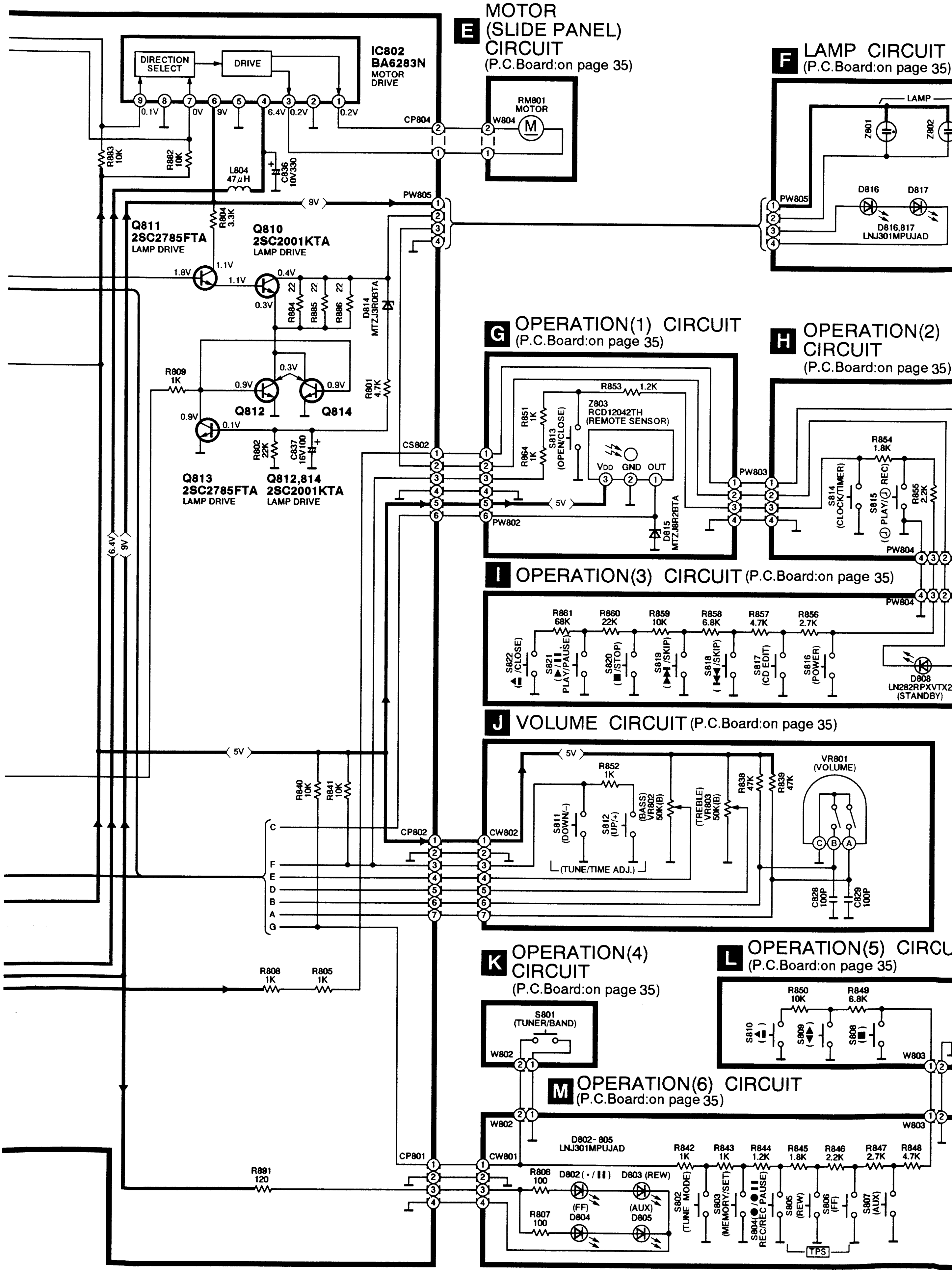
D FL/TUNER(1) CIRCUIT For [GN] area. (P.C.Board:on page 34)


Z3 FM FRONT END(RAL0029)
2SK544F
RF AMP
2SC2786M
FM MIXER
2.2P
0.47μH
5.6P
1.2μH
180P
820K
10P
3.3P
390
1000P
FM SIGNAL
JK1
FM ANT
75Ω
GND
100K
1000P
220
390
560K
100K
680K
4.7P
2.7K
2.2P
2.2P
10P
2SC1675LIL2
BUFFER AMP
(LOCAL OSC)
C15 0.01
C16 16V22
R15 100
AM ANT EXT
LOOP
L4 0.68μH
L5 0.68μH
AM SIGNAL
FM OSC SIGNAL
Z1
AM OSC SIGNAL
Ca
AM ANT
AM OSC
L3 0.47μH
C49 330P
R45 1K
C47 0.047
R46 100K
C48 8.2P
A
B
C
D
R48 390
C62 16V22
(15V)
R64 68
R78 68
R65 10K
D4 MTZJ5R1CTA
C56 1000P
C57 16V100
C54 18P
C55 15P
R47 5.6K
C52 25V4.7
R49 560
C51 0.01
Q10
X3 (7.2MHz)
2.3V P-P
F=7.2MHz
C65 1000P
L8 1μH
C59 33P
C60 1000P
R63 10K
R60 56K
R50 1K
C53 0.01
Q11
〈0.6V〉 [0.6V]
[1.1V] 〈1.1V〉
[2.7V] 〈2.7V〉
[1.1V] 〈1.1V〉
[5.4V] 〈5.4V〉
[0V] 〈2.7V〉
[2.7V] 〈0V〉
[5.2V] 〈0V〉
[0V] 〈0V〉
[0V] 〈0V〉
[15V] 〈0V〉
X OUT
Vss
PD2
PD1
VDD
FM IN
AM IN
MONO
HCTR
LCTR
FM
(LW)
IC2
LC7218
PLL FREQUENCY SYNTHESIZER
R51 10K
1.9V P-P
F=7.2MHz
Q10,11
2SC2785FETA
FM/AM LOOP FILTER
X IN
CE
DI
CL
DO
SYC
IN0
IN1
AM
NC
STRQ
MUTE
〈2.5V〉 [2.5V]
〈0V〉 [0V]
〈0V〉 [0V]
〈0V〉 [0V]
〈5.3V〉 [5.3V]
〈5.1V〉 [0.3V]
〈0V〉 [0V]
〈4.8V〉 [5.1V]
R57 10K
D5 1SS254TA
R52 1K
R53 1K
R54 1K
R55 1K
C61 330P
R56 1K
R58 10K
V (FM)
8.9V
1.8V
87.5MHz 108MHz
F
V (AM)
7V
1.3V
527kHz 1629kHz
F


R16 8.2K
C17 0.01
R76 330
R17 330
R19 470K
C18 1000P
R77 470K
CF1
CF2
C68 1000P
R18 470
Q6
Q12
Q6,12 2SC2787LTA FM IF AMP
FM +B LINE
Q7 RVTDTA114EST POWER SUPPLY (FM:ON)
C71 330P
R40 390
C44 16V100
IC1 LA1832A FM/AM IF AMP, DET /AM OSC, MIX/FM MPX
R23 3.3K
C28 50V1
C27 820P
(FM) 4.8V P-P F=456kHz
R22 47K
C25 50V4.7
C26 8200P
X1 (456kHz)
C29 0.01
C30 0.01
C19 0.01
C20 50V3.3
C36 50V1
C37 50V1
R36 470K
R38 1.8K
C45 50V1
R32 2.7K
R34 10K
C42 5600P
Q8
C38 8200P
L6 8.2mH
C40 560P
R43 1K
R41 27K
AM OSC
AM MIX
AM RF AMP
VCO
DECODER
FREQUENCY DIVIDER
STEREO SWITCH
FM/AM IF AMP
DET
PHASE DET
R37 470K
R39 1.8K
C46 50V1
R33 2.7K
R35 10K
C43 5600P
R42 27K
Q9
C39 8200P
L7 8.2mH
C41 560P
R44 1K
Q8,9 2SC1740SSTA FILTER
R20 5.6K
R21 8.2K
C23 16V22
C24 0.047
Z2
C31 15P
C32 0.01
R24 4.7K
R25 270
X2 (10.7MHz)
C33 50V2.2
C34 50V1
R27 2.7K
C35 50V1
R28 47K
C21 16V100
C22 0.01
C63 0.01
C64 0.01
R61 1K
C67 1000P
R26 470
R29 100
9V
15V
C66 1000P
Ⓐ 1 MUTE 2 Rch OUT 3 CE 4 Lch OUT 5 DI 6 DO 7 CL
Ⓑ 1 GND 2 +B(3) 3 VT 4 ST EYE 5 — 6 SD 7 +B(4)
To D FL/TUNER(2) CIRCUIT(Ⓐ) on page 27
To D FL/TUNER(2) CIRCUIT(Ⓑ) on page 27

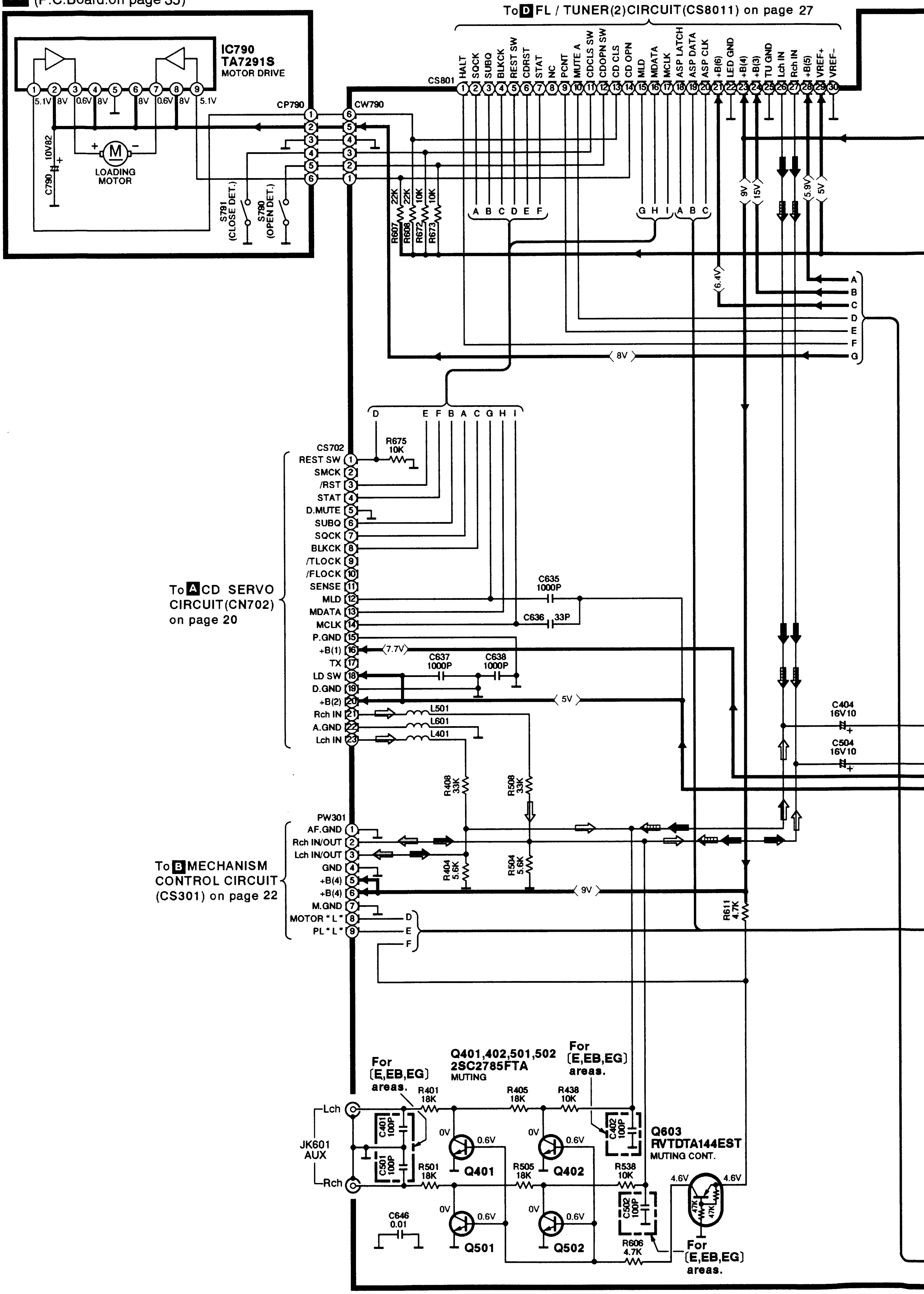
D FL / TUNER(2) CIRCUIT (P.C.Board:on page 34)


LCD801(RSL5186-L)
LCD DISPLAY
IC801
M38257M8087F
SYSTEM CONTROL/
LCD DRIVE
SEG0 SEG1 SEG2 SEG3 SEG4 SEG5 SEG6 SEG7 SEG8 SEG9
SEG10 SEG11 SEG12 SEG13 SEG14 SEG15 SEG16 SEG17 SEG18 SEG19 SEG20 SEG21 SEG22 SEG23 SEG24 SEG25 SEG26 SEG27 SEG28 SEG29
NC NC ASPCLK ASPDATA ASPLATCH MCLK MDATA MLD P.OPEN P.CLOSE
VDD VREF AVss COM3 COM2 COM1 COM0 VL3 VL2 NC
NC VL1 MKIN1 AN7 MKIN2 AN6 CRTMR AN5 PWRDET AN4 TRBLVR AN3 BASSVR AN2 KEY2 AN1 KEY1 AN0 TMUTE PLL CE PLL CL PLL DI PLL DO SD SYNC/HALT RMT IN STEREO SQCK DES1 SUBQ BLKCK REST SW CDRST STAT DMT BP RECH CrO2
CDOPN SW CDCLS SW JOG1 JOG2 CD OPEN CD CLOSE KEY LED DES3 MBP2 MBP1 GND X OUT X IN XC OUT XC IN RESET DES2 MUTE A PCNT NC
T=15.2ms.
4.5V 3V 1.5V 0V
3V P-P F=4.19MHz
1.6V P-P F=4.19MHz
5.2V P-P F=32.7kHz
1V P-P F=32.7kHz
Q807,808
2SC2785FTA
SWITCHING(MBP)
For [GN] area.
For [E,EB,EG] areas.
Q808
Q807
Q806
RVTDTC144EST
RESET
X801 (4.19MHz)
X802 (32.7kHz)
D810 1SS291TA
D811 1SS254TA
D809 1SS254TA
D813 1SS291TA
R869 2.2K
R870 2.2K
R832 2.2K
R889 2.2K
R888 2.2K
R887 2.2K
R867 1.5K
C838 330P
C839 330P
C840 330P
R837 4.7K
C827 1000P
R876 10K
R875 10K
R834 680
C822 68P
C825 68P
R868 1M
C823 68P
C824 68P
R836 4.7K
C826 1000P
R835 330K
R833 10M
C820 18P
C821 18P
R871 10K
R862 47K
C833 0.01
C830 100P
C831 50V1
C819 0.01
C832 50V1
R830 1K
C818 100P
R831 1K
R878 22K
R877 22K
R881 1K
R873 10K
R880 1K
C801 1000P
R810 330
C806 6.3V1000
C807 6.3V1000
R818 15K
R812 15K
R813 82K
R811 82K
R814 2.2K
R825 1K
R826 10K
R816 560
R817 100K
R815 100K
C809 6.3V47
C810 560P
C811 560P
C812 560P
C813 560P
C814 560P
C815 560P
C816 560P
C817 560P
R819 4.7K
R820 4.7K
R821 4.7K
R822 4.7K
R823 4.7K
R824 4.7K
R827 4.7K
R828 4.7K
R829 4.7K
R866 15K
5V
9V
15V
5.9V
6.4V
B GND +B(3) VT ST EYE SD +B(4)
A MUTE Rch IN CE Lch IN DI DO CL
CS303 VREF+ VREF- AN7 AN6 DMT BP REC"H" CrO2
CS8011 HALT SQCK SUBQ BLKCK REST SW CDRST STAT NC PCNT MUTE A CDCLS SW CDOPN SW CD CLS CD OPN MLD MDATA MCLK ASP LATCH ASP DATA ASP CLK +B(6) LED GND +B(4) +B(3) TU GND Lch OUT Rch OUT +B(5) VREF+ VREF-
To D FL/TUNER(1) CIRCUIT(B) on page 24 or 26
To D FL/TUNER(1) CIRCUIT(A) on page 24 or 26
To B MECHANISM CONTROL CIRCUIT (PW303) on page 22
To O MAIN CIRCUIT(CS801) on page 29

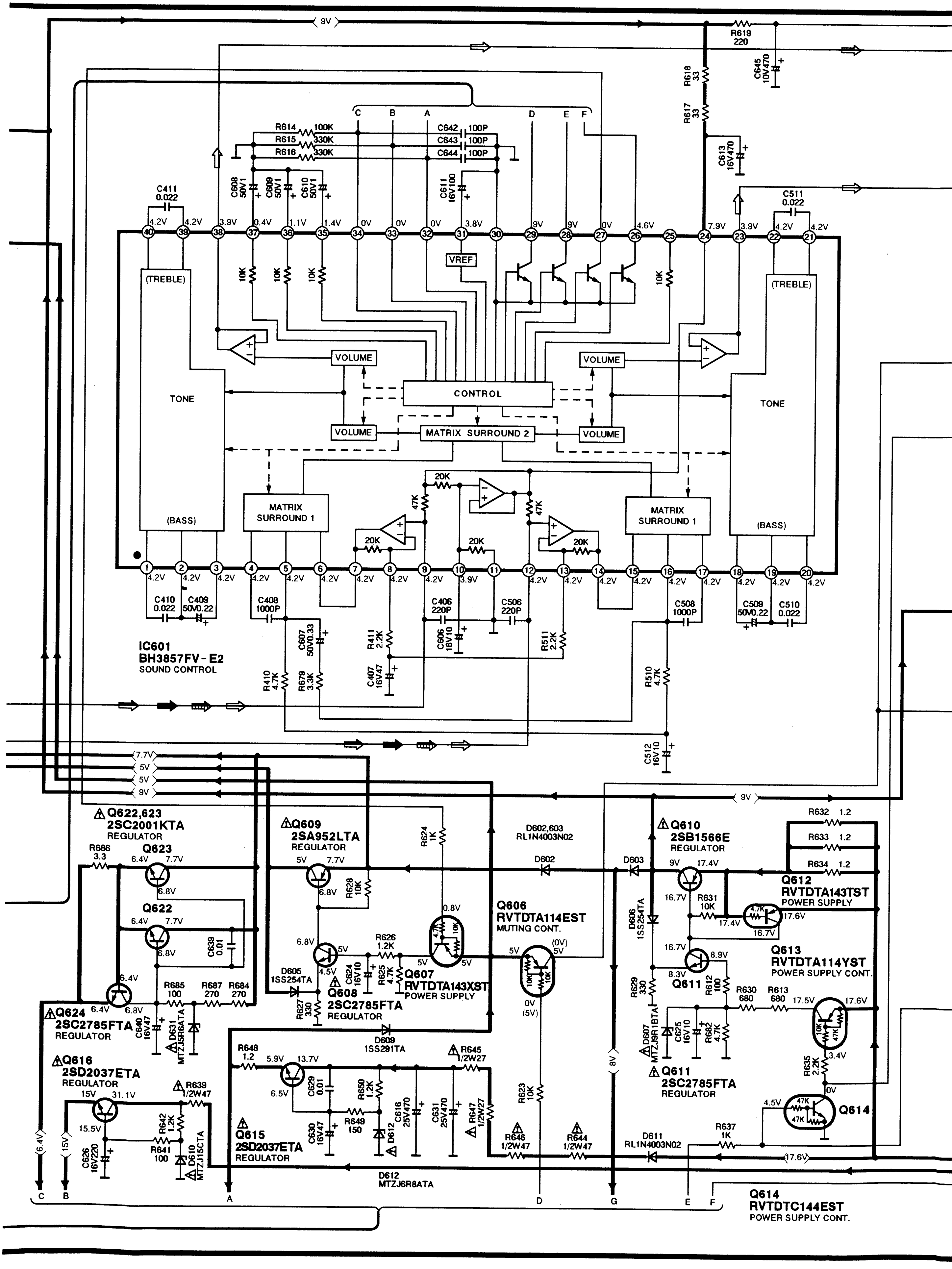

E MOTOR (SLIDE PANEL) CIRCUIT
(P.C.Board:on page 35)
F LAMP CIRCUIT
(P.C.Board:on page 35)
G OPERATION(1) CIRCUIT
(P.C.Board:on page 35)
H OPERATION(2) CIRCUIT
(P.C.Board:on page 35)
I OPERATION(3) CIRCUIT (P.C.Board:on page 35)
J VOLUME CIRCUIT (P.C.Board:on page 35)
K OPERATION(4) CIRCUIT
(P.C.Board:on page 35)
L OPERATION(5) CIRCU
(P.C.Board:on page 35)
M OPERATION(6) CIRCUIT
(P.C.Board:on page 35)
DIRECTION SELECT
DRIVE
IC802
BA6283N
MOTOR DRIVE
0.1V
0V
9V
6.4V
0.2V
0.2V
CP804
RM801
MOTOR
W804
R883 10K
R882 10K
L804 47μH
C836 10V330
PW805
9V
Q811
2SC2785FTA
LAMP DRIVE
R804 3.3K
Q810
2SC2001KTA
LAMP DRIVE
1.8V
1.1V
1.1V
0.4V
0.3V
R884 22
R885 22
R886 22
D814 MTZJ3R0BTA
R809 1K
0.9V
0.3V
0.9V
Q812
Q814
0.9V
0.1V
R801 4.7K
R802 22K
C837 16V100
Q813
2SC2785FTA
LAMP DRIVE
Q812,814
2SC2001KTA
LAMP DRIVE
CS802
LAMP
Z801
Z802
D816
D817
D816,817
LNJ301MPUJAD
R853 1.2K
R851 1K
R864 1K
S813 (OPEN/CLOSE)
Z803
RCD12042TH
(REMOTE SENSOR)
VDD GND OUT
5V
PW802
D815 MTZJ8R2BTA
PW803
R854 1.8K
S814 (CLOCK/TIMER)
S815 (PLAY/REC)
R855 2.2K
PW804
R861 68K
R860 22K
R859 10K
R858 6.8K
R857 4.7K
R856 2.7K
S822 (CLOSE)
S821 (PLAY/PAUSE)
S820 (■/STOP)
S819 (SKIP)
S818 (SKIP)
S817 (CD EDIT)
S816 (POWER)
D808
LN282RPXVTX2
(STANDBY)
6.4V
9V
5V
R840 10K
R841 10K
C
F
E
D
B
A
G
CP802
CW802
R852 1K
S811 (DOWN/-)
S812 (UP/+)
(TUNE/TIME ADJ.)
(BASS) VR802 50K(B)
(TREBLE) VR803 50K(B)
R838 47K
R839 47K
VR801 (VOLUME)
C B A
C828 100P
C829 100P
R808 1K
R805 1K
S801 (TUNER/BAND)
W802
R850 10K
R849 6.8K
S810
S809
S808
W803
D802-805
LNJ301MPUJAD
CP801
CW801
R891 120
R806 100
R807 100
D802 (•/II)
D803 (REW)
(FF) D804
(AUX) D805
R842 1K
R843 1K
R844 1.2K
R845 1.8K
R846 2.2K
R847 2.7K
R848 4.7K
S802 (TUNE MODE)
S803 (MEMORY/SET)
S804 (●/●II REC/REC PAUSE)
S805 (REW)
S806 (FF)
S807 (AUX)
TPS

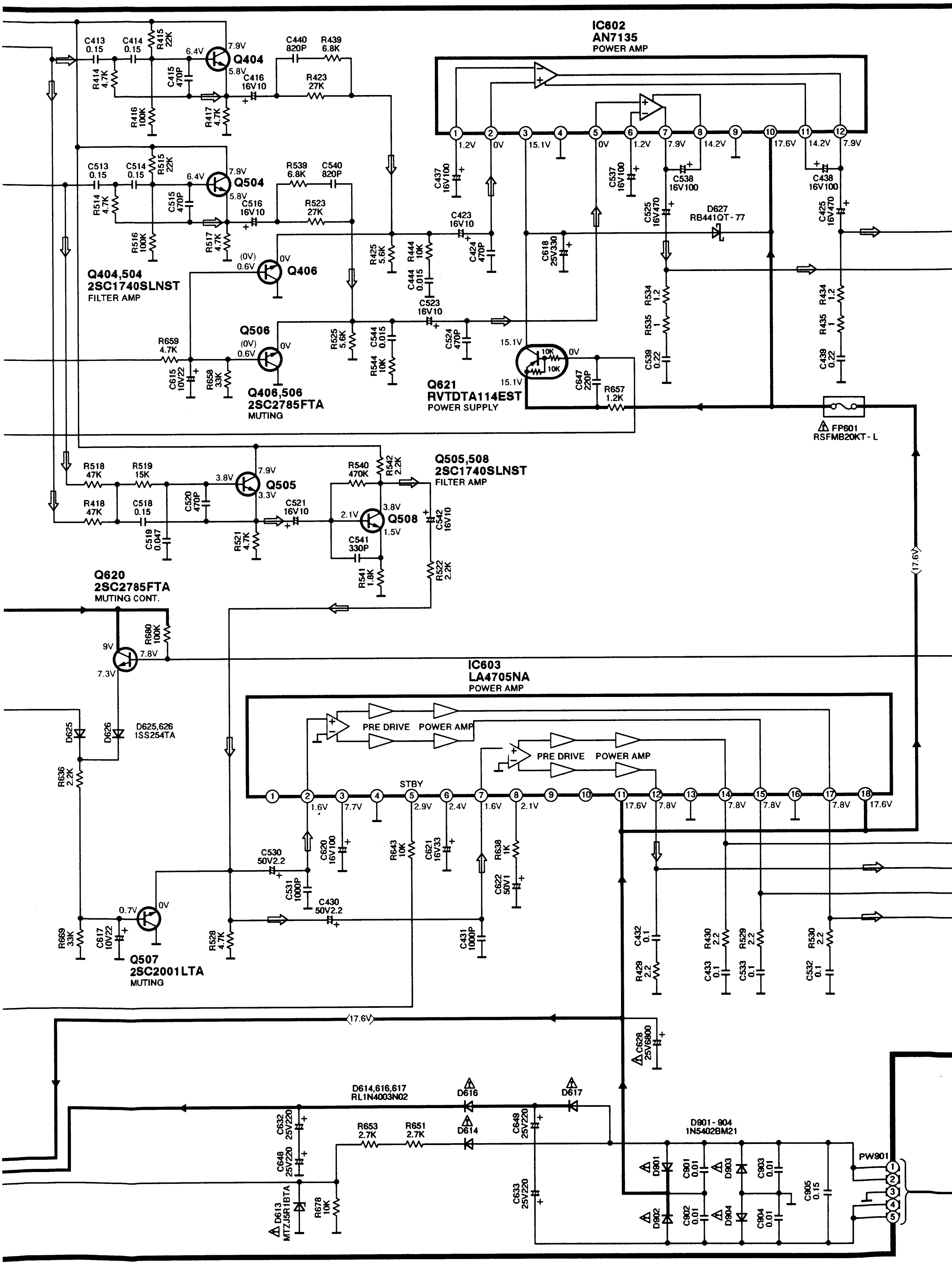
N LOADING MOTOR CIRCUIT

(P.C.Board:on page 35)

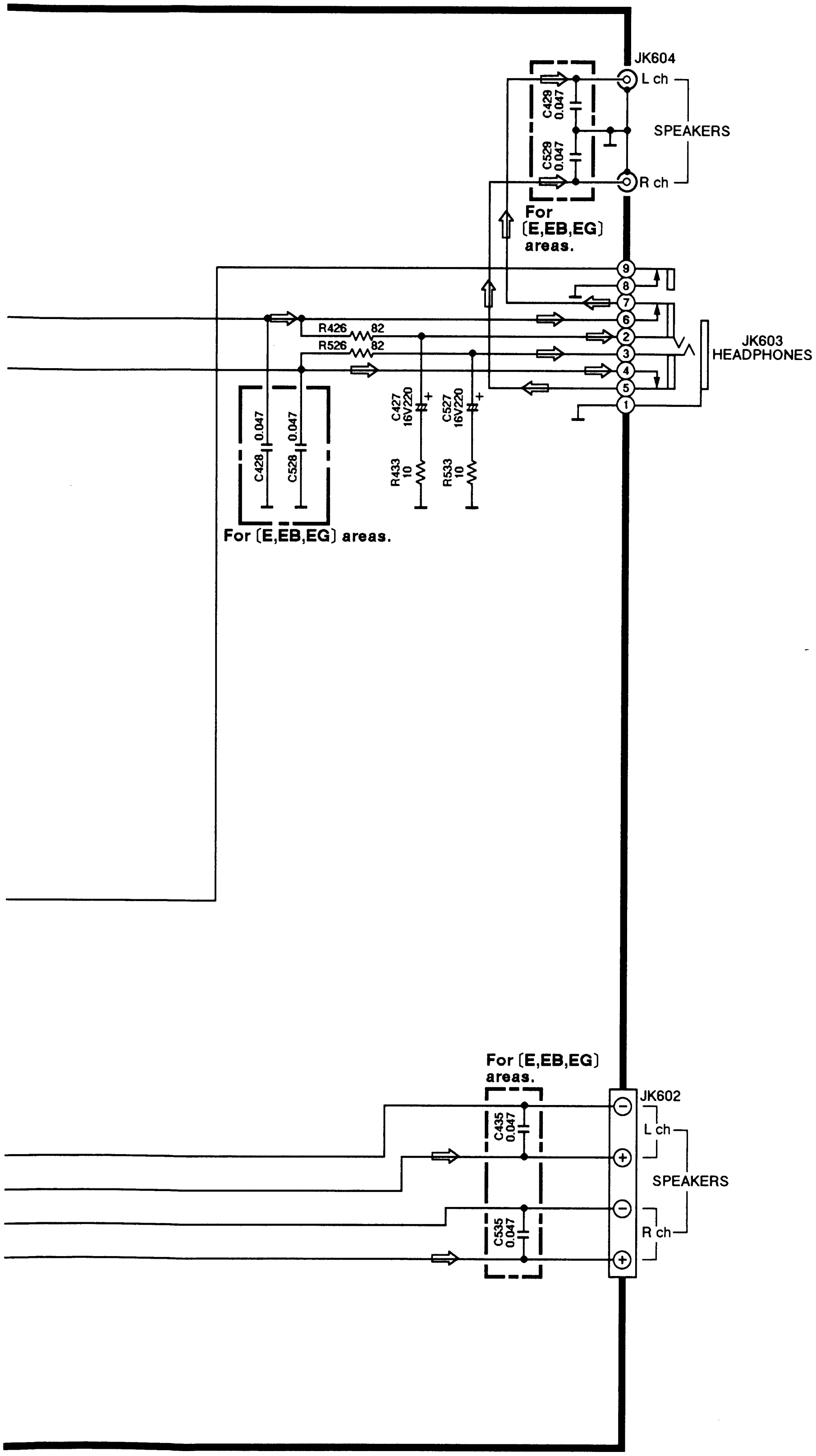

IC790
TA7291S
MOTOR DRIVE
5.1V 8V 0.6V 8V 8V 0.6V 8V 5.1V
C790 10V82
LOADING MOTOR
M
CP790
CW790
S791 (CLOSE DET.)
S790 (OPEN DET.)
To D FL / TUNER(2)CIRCUIT(CS8011) on page 27
CS801
HALT
SQCK
SUBQ
BLKCK
REST SW
CDRST
STAT
NC
PCNT
MUTE A
CDCLS SW
CDOPN SW
CD CLS
CD OPN
MLD
MDATA
MCLK
ASP LATCH
ASP DATA
ASP CLK
+B(6)
LED GND
+B(4)
+B(3)
TU GND
Lch IN
Rch IN
+B(5)
VREF+
VREF–
R607 22K
R608 22K
R672 10K
R673 10K
A B C D E F
G H I
A B C
9V
15V
5.9V
5V
6.4V
8V
A
B
C
D
E
F
G
D E F B A C G H I
R675 10K
CS702
REST SW
SMCK
/RST
STAT
D.MUTE
SUBQ
SQCK
BLKCK
/TLOCK
/FLOCK
SENSE
MLD
MDATA
MCLK
P.GND
+B(1)
TX
LD SW
D.GND
+B(2)
Rch IN
A.GND
Lch IN
To A CD SERVO CIRCUIT(CN702) on page 20
C635 1000P
C636 33P
7.7V
C637 1000P
C638 1000P
5V
L501
L601
L401
C404 16V10
C504 16V10
R408 33K
R508 33K
PW301
AF.GND
Rch IN/OUT
Lch IN/OUT
GND
+B(4)
+B(4)
M.GND
MOTOR "L"
PL "L"
To B MECHANISM CONTROL CIRCUIT (CS301) on page 22
R404 5.6K
R504 5.6K
9V
R611 4.7K
D
E
F
For [E,EB,EG] areas.
Q401,402,501,502
2SC2785FTA
MUTING
For [E,EB,EG] areas.
R401 18K
R405 18K
R438 10K
Lch
JK601 AUX
Rch
C401 100P
C501 100P
0V
0.6V
Q401
0V
0.6V
Q402
C402 100P
Q603
RVTDTA144EST
MUTING CONT.
R501 18K
R505 18K
R538 10K
4.6V
4.6V
47K
47K
C502 100P
C646 0.01
0V
0.6V
Q501
0V
0.6V
Q502
R606 4.7K
For [E,EB,EG] areas.

O MAIN CIRCUIT (P.C.Board:on pages 36,37)


9V
R619
220
C645
10V470
R618
33
R617
33
C613
16V470
C
B
A
D
E
F
R614 100K
R615 330K
R616 330K
C642 100P
C643 100P
C644 100P
C608
50V1
C609
50V1
C610
50V1
C611
16V100
C411
0.022
C511
0.022
VREF
(TREBLE)
TONE
(BASS)
VOLUME
CONTROL
MATRIX SURROUND 2
MATRIX SURROUND 1
20K
47K
10K
C410
0.022
C409
50V0.22
C408
1000P
C607
50V0.33
R411
2.2K
C406
220P
C606
16V10
C506
220P
R511
2.2K
C508
1000P
C509
50V0.22
C510
0.022
C407
16V47
R410
4.7K
R679
3.3K
R510
4.7K
C512
16V10
IC601
BH3857FV-E2
SOUND CONTROL
7.7V
5V
5V
9V
Q622,623
2SC2001KTA
REGULATOR
R686
3.3
Q623
Q622
C639
0.01
R685
100
R687
270
R684
270
C640
16V47
D631
MTZJ5R6ATA
Q624
2SC2785FTA
REGULATOR
Q609
2SA952LTA
REGULATOR
R628
10K
R624
1K
R626
1.2K
C624
16V10
R625
4.7K
D605
1SS254TA
R627
330
Q608
2SC2785FTA
REGULATOR
Q607
RVTDTA143XST
POWER SUPPLY
D609
1SS291TA
D602,603
RL1N4003N02
D602
D603
Q606
RVTDTA114EST
MUTING CONT.
Q610
2SB1566E
REGULATOR
R632 1.2
R633 1.2
R634 1.2
Q612
RVTDTA143TST
POWER SUPPLY
R631
10K
D606
1SS254TA
Q611
R612
100
R629
330
Q613
RVTDTA114YST
POWER SUPPLY CONT.
R630
680
R613
680
D607
MTZJ9R1BTA
C625
16V10
R682
4.7K
Q611
2SC2785FTA
REGULATOR
R635
2.2K
Q614
R637
1K
17.6V
Q616
2SD2037ETA
REGULATOR
R639
1/2W47
R642
1.2K
R641
100
C626
16V220
D610
MTZJ15CTA
R648
1.2
C629
0.01
R650
1.2K
R649
150
C630
16V47
D612
C616
25V470
C631
25V470
R645
1/2W27
R647
1/2W27
Q615
2SD2037ETA
REGULATOR
R623
10K
R646
1/2W47
R644
1/2W47
D611
RL1N4003N02
D612
MTZJ6R8ATA
(6.4V)
(15V)
(8V)
C
B
A
D
G
E
F
Q614
RVTDTC144EST
POWER SUPPLY CONT.

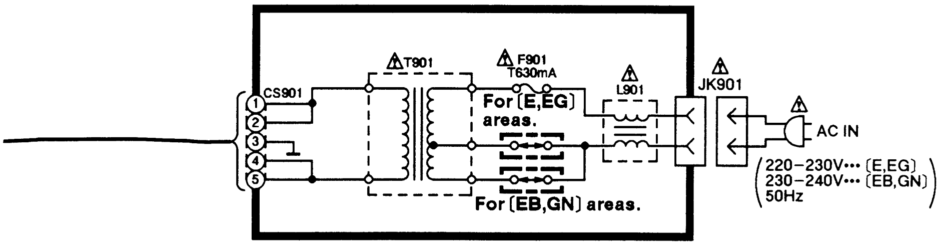

IC602
AN7135
POWER AMP
C413 0.15
C414 0.15
R415 22K
R414 4.7K
C415 470P
R416 100K
R417 4.7K
Q404
6.4V
7.9V
5.8V
C416 16V10
C440 820P
R439 6.8K
R423 27K
C513 0.15
C514 0.15
R515 22K
R514 4.7K
C515 470P
R516 100K
R517 4.7K
Q504
C516 16V10
R539 6.8K
C540 820P
R523 27K
Q404,504
2SC1740SLNST
FILTER AMP
Q406
(0V)
0.6V
0V
Q506
R659 4.7K
C615 10V22
R658 33K
Q406,506
2SC2785FTA
MUTING
R425 5.6K
R444 10K
C444 0.015
C423 16V10
C424 470P
C523 16V10
C524 470P
R525 5.6K
C544 0.015
R544 10K
1.2V
0V
15.1V
0V
1.2V
7.9V
14.2V
17.6V
14.2V
7.9V
C437 16V100
C537 16V100
C538 16V100
C438 16V100
C525 16V470
C425 16V470
D627
RB441QT-77
C618 25V330
R534 1.2
R535 1
C539 0.22
R434 1.2
R435 1
C439 0.22
Q621
RVTDTA114EST
POWER SUPPLY
15.1V
10K
10K
C647 220P
R657 1.2K
FP601
RSFMB20KT-L
(17.6V)
R518 47K
R519 15K
R418 47K
C518 0.15
C519 0.047
C520 470P
Q505
3.8V
7.9V
3.3V
R521 4.7K
C521 16V10
R540 470K
R542 2.2K
Q508
2.1V
3.8V
1.5V
C541 330P
R541 1.8K
C542 16V10
R522 2.2K
Q505,508
2SC1740SLNST
FILTER AMP
Q620
2SC2785FTA
MUTING CONT.
9V
7.8V
7.3V
R680 100K
D625
D626
D625,626
1SS254TA
R636 2.2K
IC603
LA4705NA
POWER AMP
PRE DRIVE
POWER AMP
PRE DRIVE
POWER AMP
STBY
1.6V
7.7V
2.9V
2.4V
1.6V
2.1V
17.6V
7.8V
7.8V
7.8V
7.8V
17.6V
C620 16V100
R643 10K
C621 16V33
R638 1K
C622 50V1
C530 50V2.2
C531 1000P
C430 50V2.2
C431 1000P
Q507
2SC2001LTA
MUTING
0.7V
0V
R669 33K
C617 10V22
R528 4.7K
C432 0.1
R429 2.2
R430 2.2
C433 0.1
R529 2.2
C533 0.1
R530 2.2
C532 0.1
(17.6V)
C628 25V6800
D614,616,617
RL1N4003N02
D616
D617
D614
R653 2.7K
R651 2.7K
C632 25V220
C648 25V220
D613 MTZJ5R1BTA
R678 10K
C649 25V220
C633 25V220
D901-904
1N5402BM21
D901
D902
C901 0.01
C902 0.01
D903
D904
C903 0.01
C904 0.01
C905 0.15
PW901

O MAIN CIRCUIT (P.C.Board:on pages 36,37)


JK604
L ch
SPEAKERS
R ch
C429 0.047
C529 0.047
For (E,EB,EG) areas.
9
8
7
6
2
3
4
5
1
JK603 HEADPHONES
R426 82
R526 82
C427 16V220
C527 16V220
R433 10
R533 10
C428 0.047
C528 0.047
For (E,EB,EG) areas.
For (E,EB,EG) areas.
JK602
C435 0.047
C535 0.047
L ch
SPEAKERS
R ch

P POWER SUPPLY CIRCUIT

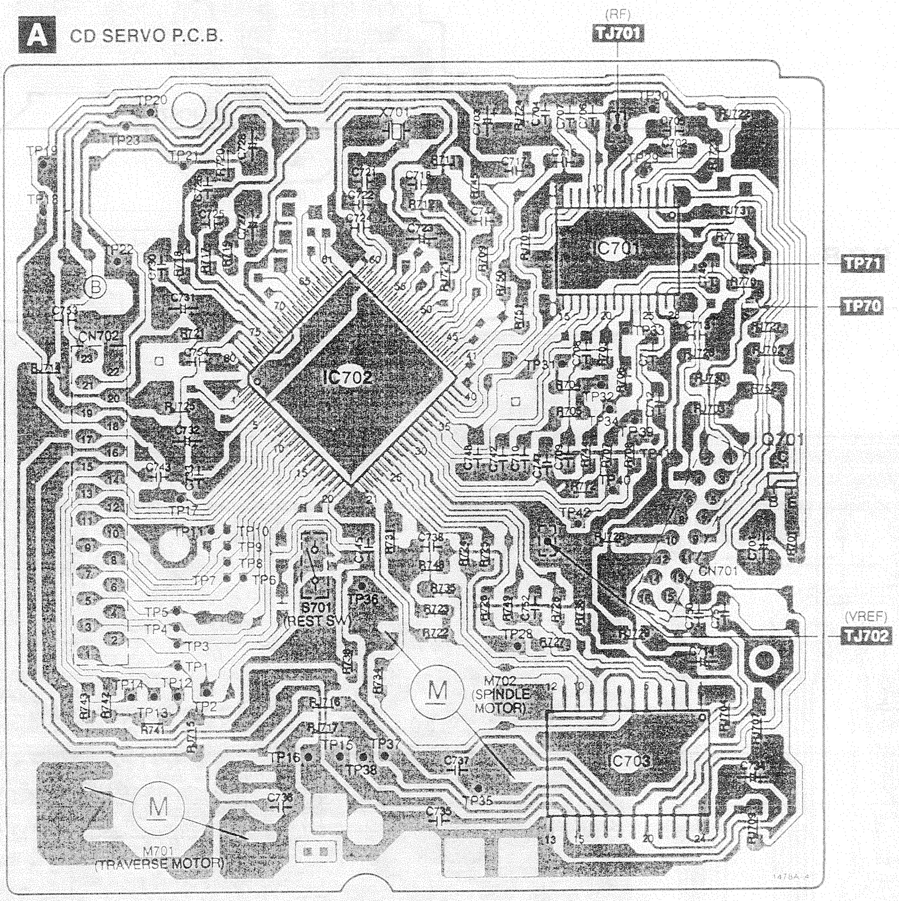
(P.C.Board:on page 37)


CS901
1
2
3
4
5
T901
F901 T630mA
For (E,EG) areas.
L901
For (EB,GN) areas.
JK901
AC IN
220–230V··· (E,EG)
230–240V··· (EB,GN)
50Hz

■ Printed Circuit Board Diagram

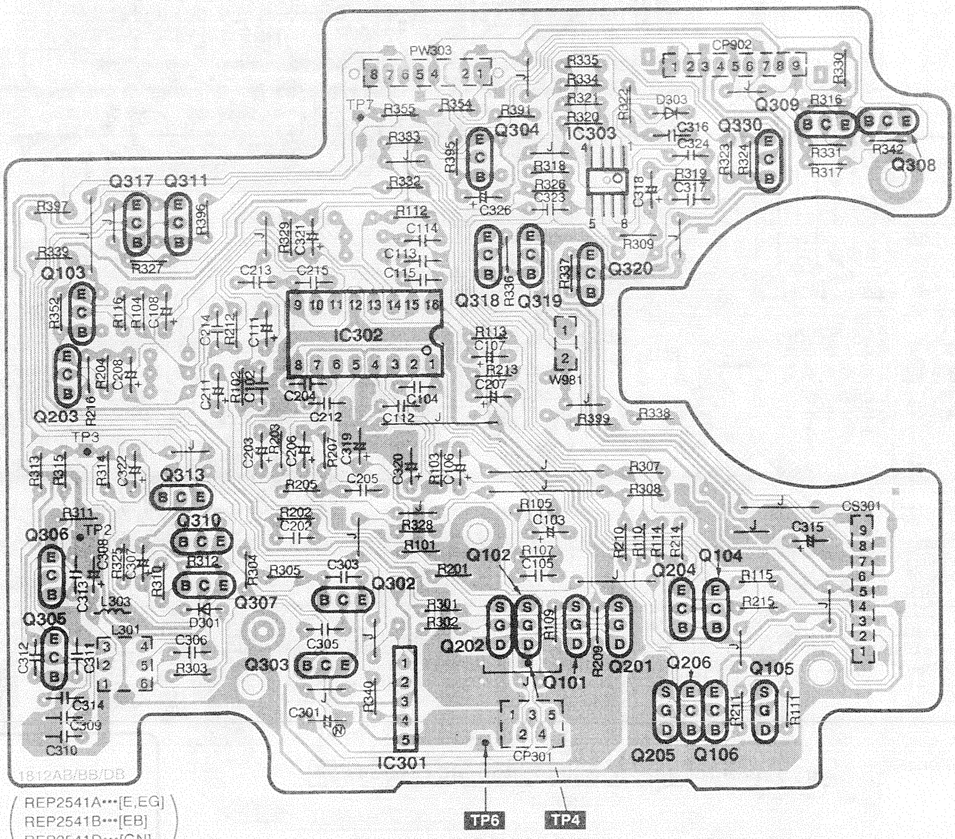
- This circuit board diagram may be modified at any time with the development of new technology.

A CD SERVO P.C.B.


(RF)
TJ701
TP71
TP70
(VREF)
TJ702
IC701
IC702
IC703
X701
CN701
CN702
Q701
S701
(REST SW)
M702
(SPINDLE MOTOR)
M701
(TRAVERSE MOTOR)
TP1
TP2
TP3
TP4
TP5
TP6
TP7
TP8
TP9
TP10
TP11
TP12
TP13
TP14
TP15
TP16
TP17
TP18
TP19
TP20
TP21
TP22
TP23
TP28
TP29
TP30
TP31
TP32
TP33
TP34
TP35
TP36
TP37
TP38
TP40
TP42
R741
R742
R743
R714
R715
R716
R717
R722
R723
R725
R727
R731
R734
R735
R748
C731
C732
C733
C735
C736
C737
C738
C743
1476A-4

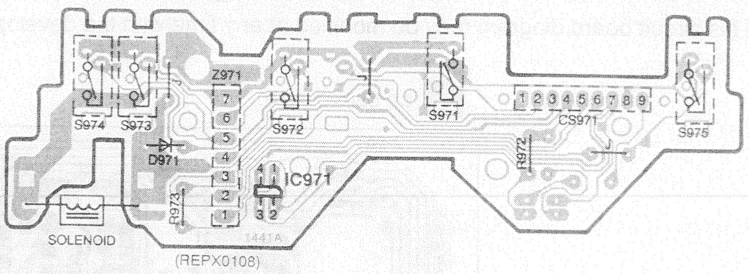
(REP2144A-N)

B MECHANISM CONTROL P.C.B.

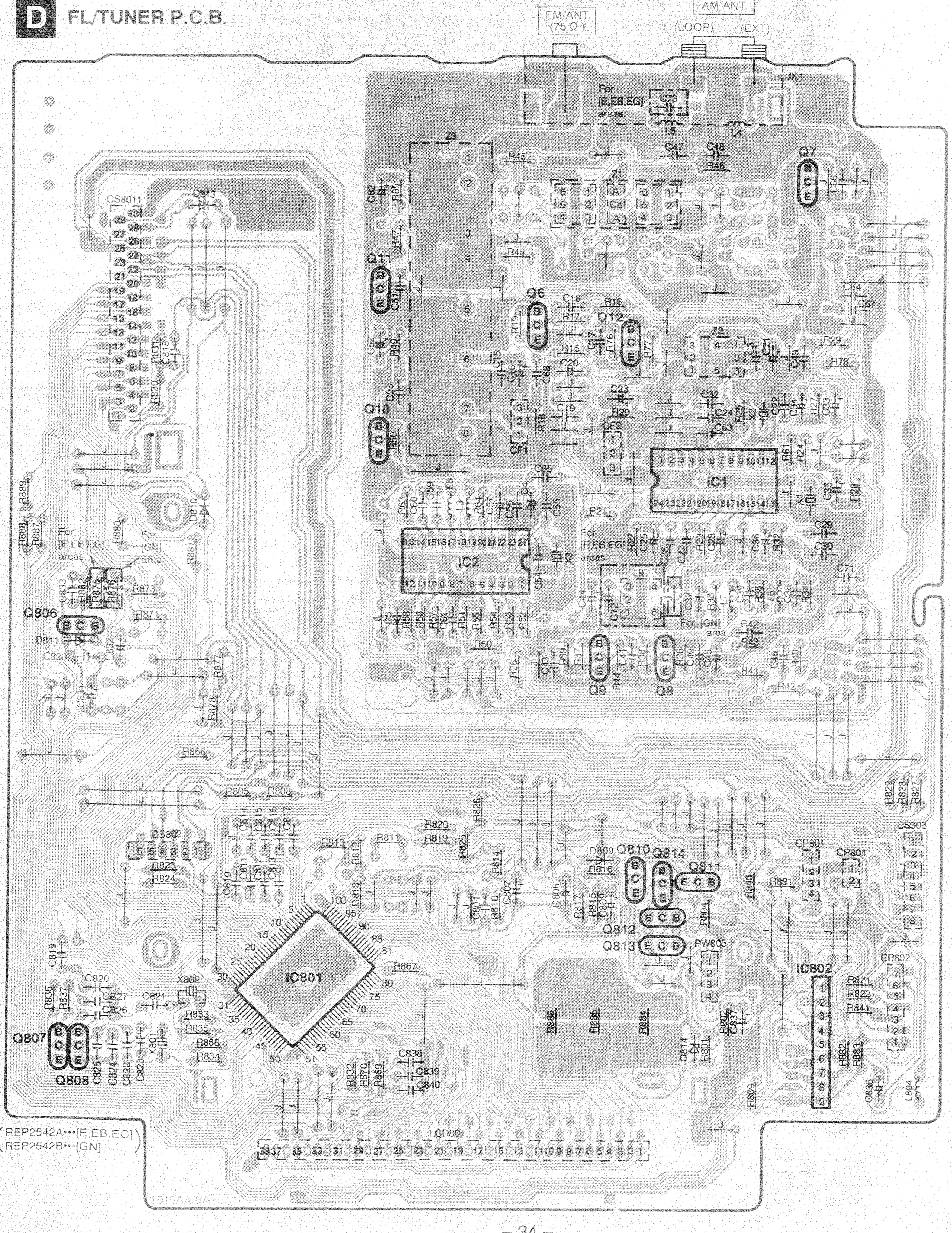

PW303
CP902
TP7
R355
R354
R391
R335
R334
R321
R320
R322
IC303
D303
Q309
Q330
R316
R331
R342
R317
Q308
Q304
R333
R395
R318
R326
C323
C326
C316
C324
R319
C317
R323
R324
C318
R309
Q317
Q311
R397
R396
R327
R329
C321
R112
C114
C113
C115
Q318
Q319
Q320
R336
R337
R339
Q103
C213
C215
R352
R116
R104
C108
C214
R212
C111
IC302
R113
C107
R213
C207
W981
Q203
R216
R204
C208
C211
R102
C204
C212
C104
C112
R399
R338
TP3
R313
R315
R314
C322
Q313
C203
R203
C206
R207
C319
C320
R103
C106
R307
R308
R205
C205
R105
C103
CS301
C315
R311
Q306
TP2
C308
R325
C307
Q310
R202
C202
R328
R101
R107
C105
R210
R110
R114
R214
Q104
Q102
R312
R310
R304
R305
C303
Q302
R201
Q204
R115
R215
C313
L303
D301
Q307
R301
R302
Q305
L301
C306
C305
Q202
R109
R209
Q201
Q206
Q105
C312
C311
R303
Q303
Q101
R211
R111
C314
C309
C310
C301
R340
IC301
CP301
Q205
Q106
1812AB/BB/DB
TP6
TP4

REP2541A···[E,EG]
REP2541B···[EB]
REP2541D···[GN]

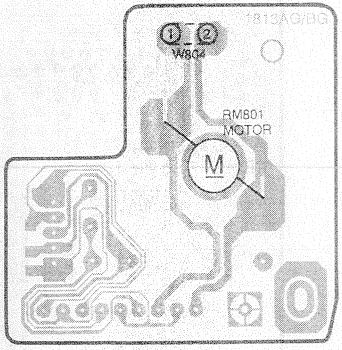
C MECHANISM P.C.B.


S974
S973
Z971
D971
S972
IC971
S971
CS971
S975
R972
R973
SOLENOID
(REPX0108)

D FL/TUNER P.C.B.

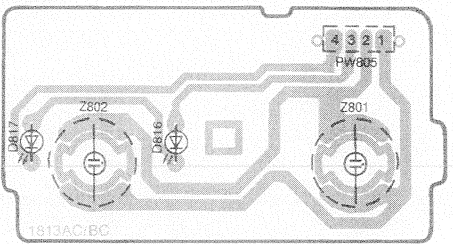

FM ANT (75 Ω)
AM ANT
(LOOP)
(EXT)
JK1
For [E,EB,EG] areas.
Z3
ANT
GND
Vt
+B
IF
OSC
Z1
Z2
Q7
Q11
Q6
Q12
Q10
CF1
CF2
IC1
IC2
X1
X2
X3
Q9
Q8
For [GN] area
CS8011
D813
D810
Q806
D811
For [E,EB,EG] areas
For [GN] area
CS802
IC801
X802
X801
Q807
Q808
D809
Q810
Q814
Q811
Q812
Q813
PW805
D814
IC802
CP801
CP804
CP802
CS303
LCD801
(REP2542A···[E,EB,EG]
REP2542B···[GN])

E MOTOR (SLIDE PANEL) P.C.B.


1813AG/BG
① ②
W804
RM801
MOTOR
M

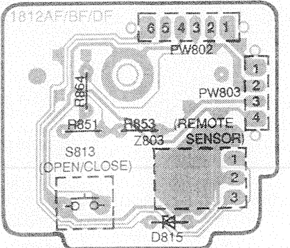
REP2542A•••[E,EB,EG]
REP2542B•••[GN]

F LAMP P.C.B.


4 3 2 1
PW805
Z802
Z801
D817
D816
1813AC/BC

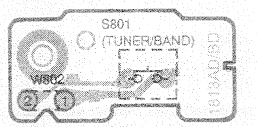
REP2542A•••[E,EB,EG]
REP2542B•••[GN]

G OPERATION (1) P.C.B.


1812AF/BF/DF
6 5 4 3 2 1
PW802
1 2 3 4
PW803
R864
R851
R853
(REMOTE SENSOR)
Z803
S813
(OPEN/CLOSE)
1 2 3
D815

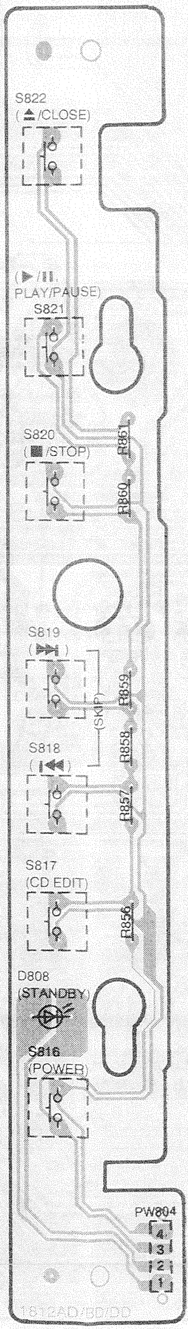
REP2541A•••[E,EG]
REP2541B•••[EB]
REP2541D•••[GN]

K OPERATION (4) P.C.B.


S801
(TUNER/BAND)
W802
② ①
1813AD/BD

REP2542A•••[E,EB,EG]
REP2542B•••[GN]

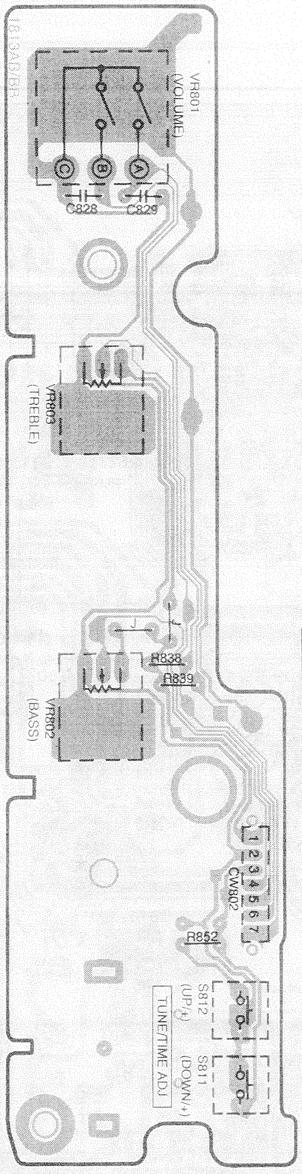
I OPERATION (3) P.C.B.


S822
(▲/CLOSE)
(▶/II,
PLAY/PAUSE)
S821
S820
(■/STOP)
R861
R860
S819
(▶▶I)
(SKIP)
R859
S818
(I◀◀)
R858
R857
S817
(CD EDIT)
R856
D808
(STANDBY)
S816
(POWER)
PW804
4 3 2 1
1812AD/BD/DD

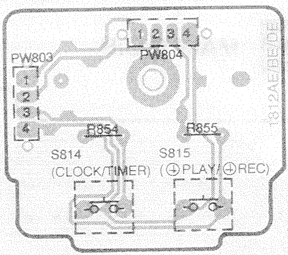
REP2541A•••[E,EG]
REP2541B•••[EB]
REP2541D•••[GN]

J VOLUME P.C.B.

REP2542A•••[E,EB,EG]
REP2542B•••[GN]

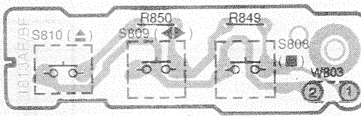

1813AB/BB
VR801
(VOLUME)
Ⓒ Ⓑ Ⓐ
C828
C829
VR803
(TREBLE)
R838
R839
VR802
(BASS)
1 2 3 4 5 6 7
CW802
R852
S812
(UP/+)
S811
(DOWN/−)
TUNE/TIME ADJ.

H OPERATION (2) P.C.B.


1 2 3 4
PW804
PW803
1 2 3 4
1812AE/BE/DE
R854
R855
S814
(CLOCK/TIMER)
S815
(⊕PLAY/⊕REC)

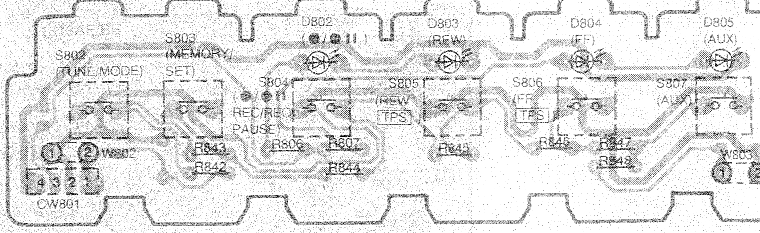
REP2541A•••[E,EG]
REP2541B•••[EB]
REP2541D•••[GN]

L OPERATION (5) P.C.B.


1813AF/BF
S810 (▲)
S809 (◀▶)
R850
R849
S808
W803
② ①

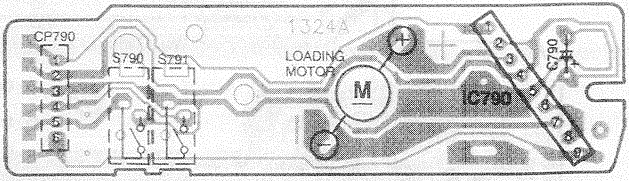
REP2542A•••[E,EB,EG]
REP2542B•••[GN]

M OPERATION (6) P.C.B.


1813AE/BE
S802
(TUNE/MODE)
S803
(MEMORY/
SET)
D802
(●/●II)
S804
(●/●II
REC/REC
PAUSE)
D803
(REW)
S805
(REW
TPS)
D804
(FF)
S806
(FF
TPS)
D805
(AUX)
S807
(AUX)
① ② W802
4 3 2 1
CW801
R843
R842
R806
R807
R844
R845
R846
R847
R848
W803

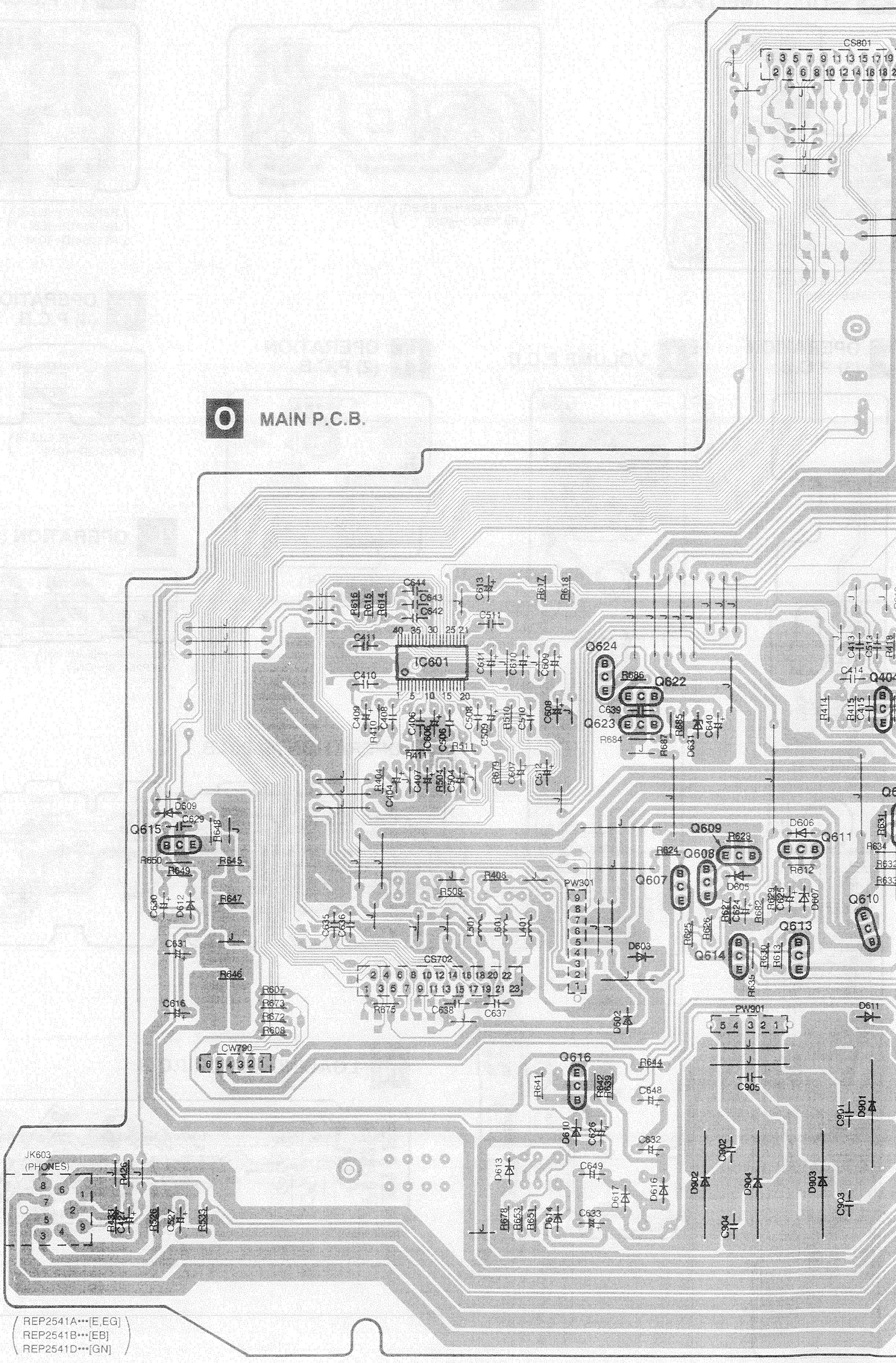
REP2542A•••[E,EB,EG]
REP2542B•••[GN]

N LOADING MOTOR P.C.B.

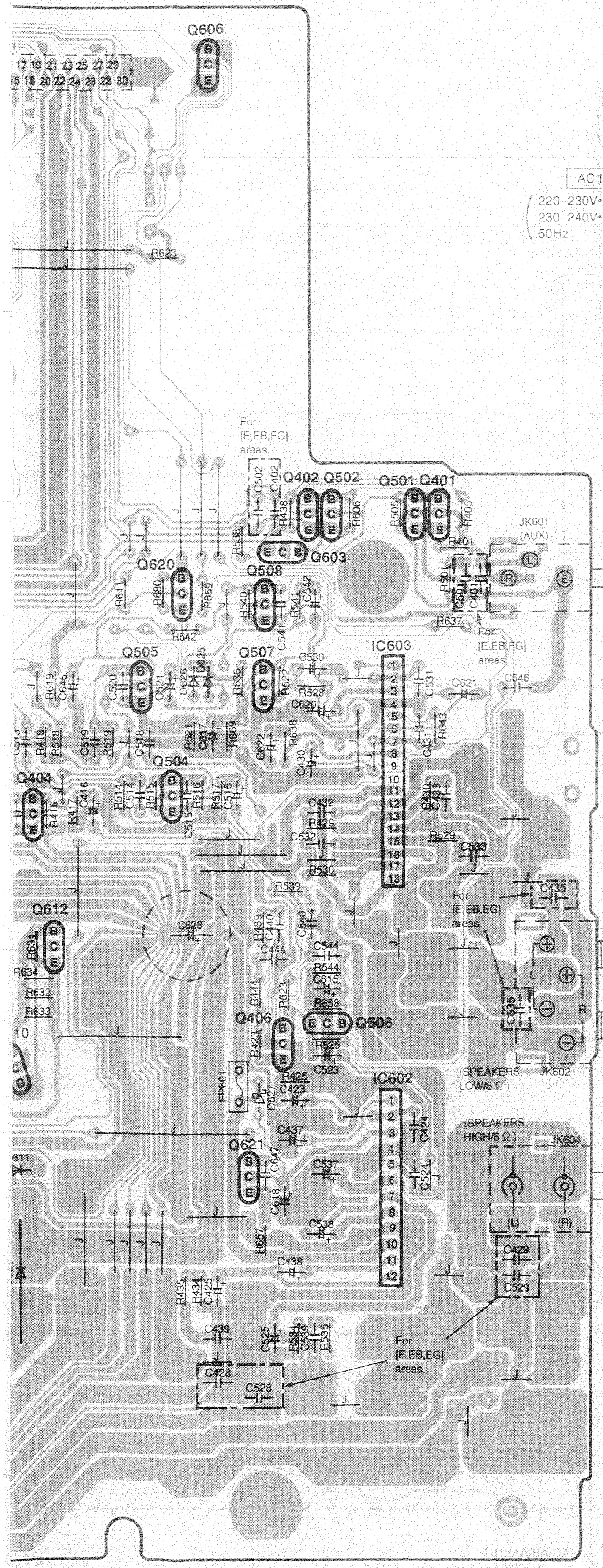

CP790
1 2 3 4 5 6
S790
S791
1324A
LOADING
MOTOR
M
IC790
C790
1 2 3 4 5 6 7 8 9

(REP1960A)

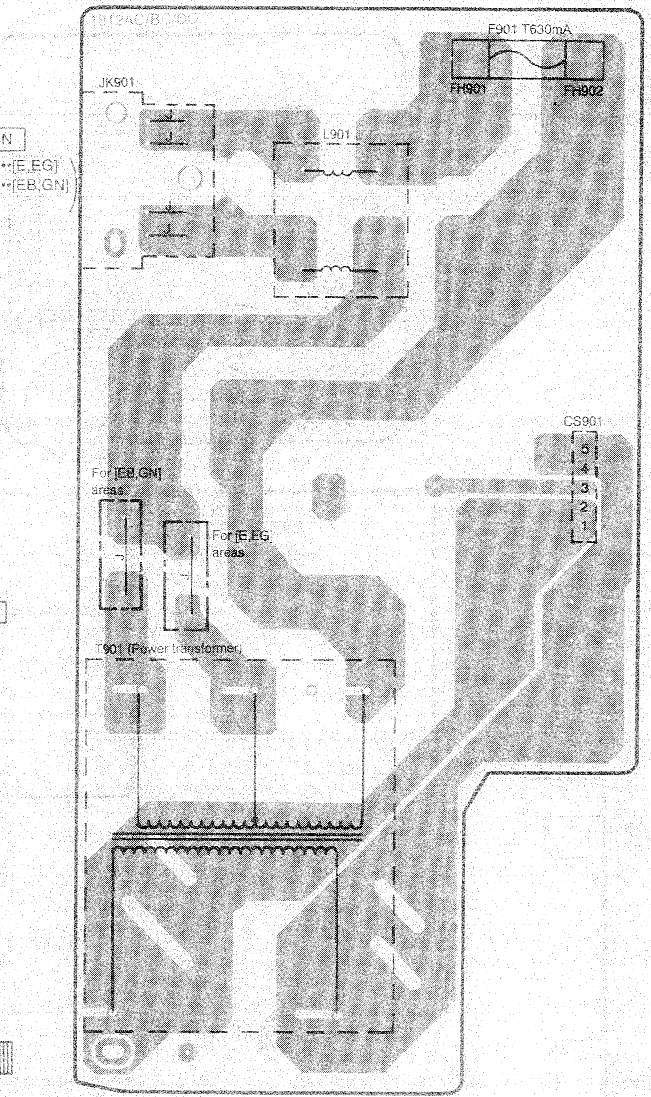
O MAIN P.C.B.


CS801
IC601
Q624
Q622
Q623
Q615
Q609
Q608
Q607
Q611
Q610
Q613
Q614
Q616
Q404
D609
D612
D631
D603
D602
D605
D606
D607
D610
D611
D613
D614
D616
D617
D901
D902
D903
D904
PW301
PW901
CS702
CW790
JK603
(PHONES)
L501
L601
L401
C901
C902
C903
C904
C905
R426
R433
R526
R532
R678
R653
R651
R641
R642
R639
R644
R607
R673
R672
R608
R675
R645
R647
R646
R649
R650
R648
R623
R624
R612
R686
R685
R684
R408
R508
R410
R411
R511
R504
R404
R414
R415
C409
C408
C410
C411
C406
C407
C404
C504
C506
C508
C509
C510
C512
C513
C607
C608
C609
C610
C611
C613
C616
C624
C625
C626
C627
C629
C630
C631
C632
C633
C635
C636
C637
C638
C639
C640
C642
C643
C644
C648
C649
C413
C414
C415
R614
R615
R616
R617
R618
R625
R626
R627
R630
R613
R631
R632
R633
R634
R635
R682
R687
R679
R510
R418

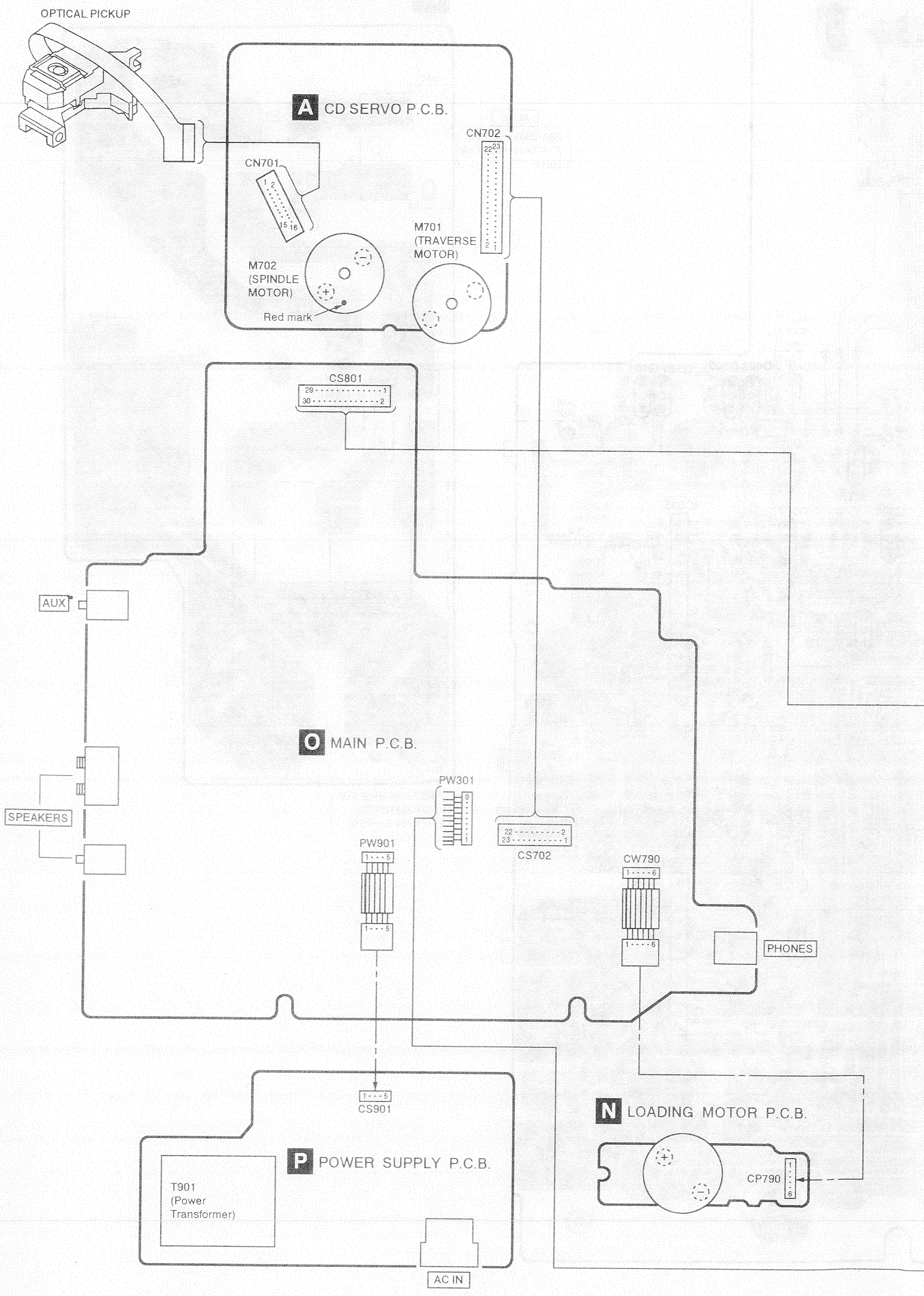
REP2541A···[E,EG]
REP2541B···[EB]
REP2541D···[GN]

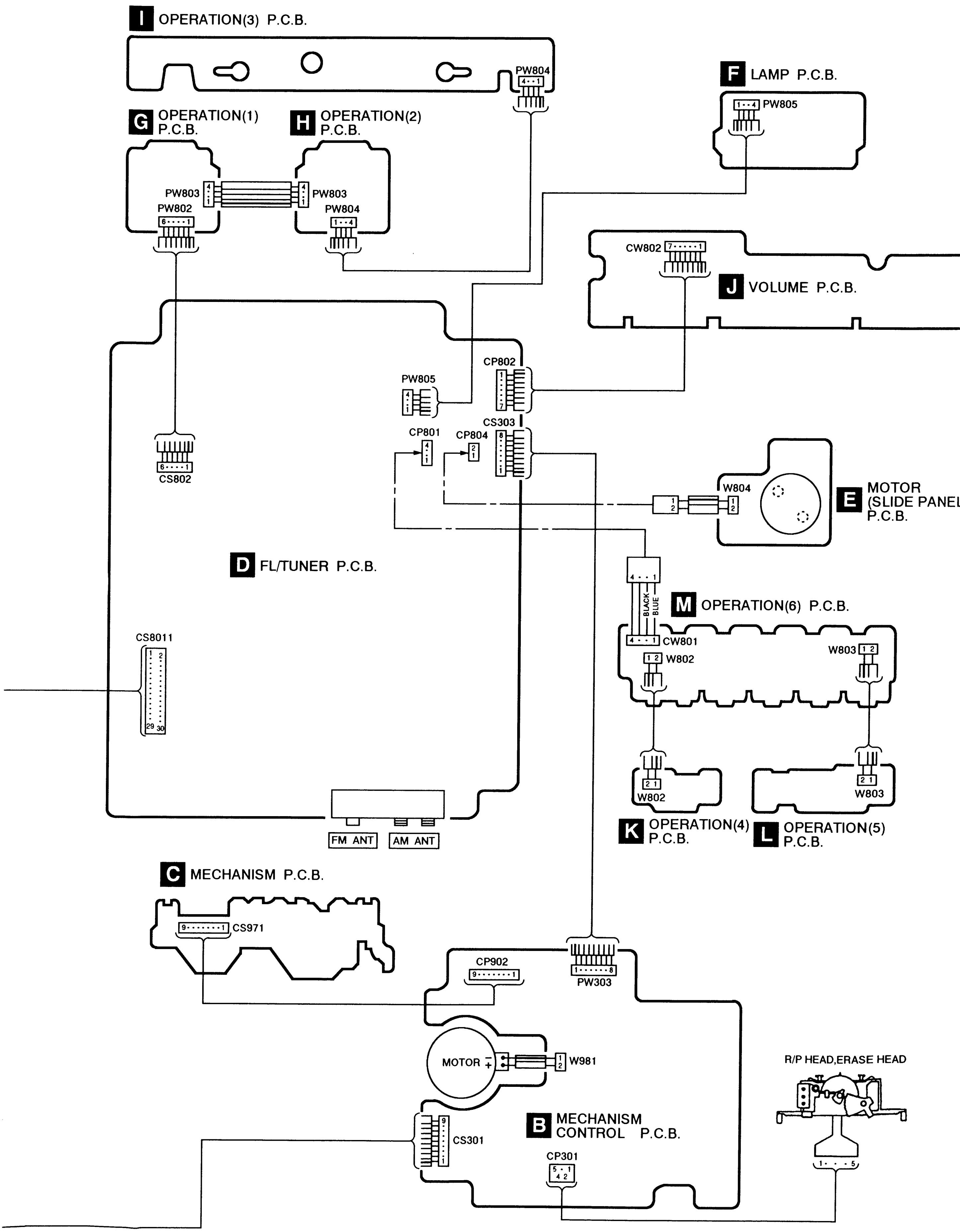

Q606
B
C
E
17 19 21 23 25 27 29
16 18 20 22 24 26 28 30
R623
For
[E,EB,EG]
areas.
C502
C402
R438
Q402 Q502
Q501 Q401
R606
R505
R405
R636
E C B Q603
JK601
(AUX)
R401
L
R
E
Q620
R611
R680
R659
Q508
R540
R541
C542
C541
R501
C501
C401
R637
For
[E,EB,EG]
areas.
R542
Q505
Q507
IC603
C530
C531
R619
C645
C520
C521
D626
D625
R636
R622
R528
C620
C621
C646
R643
R418
R518
C519
R519
C518
R521
C617
R663
C622
R638
C430
C431
Q504
Q404
C416
R416
R417
R514
C514
R515
R516
R517
C516
C515
R430
C433
C432
R429
C532
R529
C533
R530
R539
For
[E,EB,EG]
areas.
C435
Q612
R631
R634
R632
R633
C628
R439
C440
C444
C540
C544
R544
C615
R659
R444
R523
Q406
E C B Q506
R423
R525
C523
R425
C423
FP601
D627
(SPEAKERS.
LOW/6 Ω)
JK602
IC602
C424
C437
(SPEAKERS.
HIGH/6 Ω)
JK604
Q621
C647
C537
C524
C618
(L)
(R)
C538
R657
C429
C529
C438
R435
R434
C425
C439
C525
R534
C539
R535
For
[E,EB,EG]
areas.
C428
C528
1812AA/BA/DA

P POWER SUPPLY P.C.B.


1812AC/BC/DC
F901 T630mA
FH901
FH902
JK901
AC IN
220–230V•••[E,EG]
230–240V•••[EB,GN]
50Hz
L901
CS901
5
4
3
2
1
For [EB,GN]
areas.
For [E,EG]
areas.
T901 (Power transformer)
REP2541A•••[E,EG]
REP2541B•••[EB]
REP2541D•••[GN]

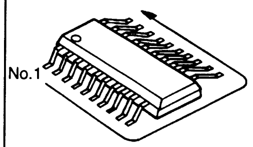
■ Wiring Connection Diagram


OPTICAL PICKUP
A CD SERVO P.C.B.
CN702
22 23
CN701
1 2
15 16
M701
(TRAVERSE
MOTOR)
M702
(SPINDLE
MOTOR)
Red mark
CS801
29 1
30 2
AUX
O MAIN P.C.B.
SPEAKERS
PW301
9
1
22 2
23 1
CS702
PW901
1 5
1 5
CW790
1 6
1 6
PHONES
1 5
CS901
N LOADING MOTOR P.C.B.
CP790
1
6
P POWER SUPPLY P.C.B.
T901
(Power
Transformer)
AC IN

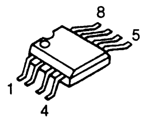

I OPERATION(3) P.C.B.
PW804
4··1
F LAMP P.C.B.
1··4 PW805
G OPERATION(1) P.C.B.
H OPERATION(2) P.C.B.
PW803
PW802
6····1
PW803
PW804
1··4
CW802
7·····1
J VOLUME P.C.B.
CP802
PW805
CS303
CP801
CP804
CS802
6····1
W804
E MOTOR (SLIDE PANEL P.C.B.
D FL/TUNER P.C.B.
4··1
BLACK
BLUE
M OPERATION(6) P.C.B.
CS8011
4··1 CW801
1 2 W802
W803 1 2
2 1
W802
2 1
W803
FM ANT
AM ANT
K OPERATION(4) P.C.B.
L OPERATION(5) P.C.B.
C MECHANISM P.C.B.
9·······1 CS971
CP902
9·······1
1······8
PW303
MOTOR
W981
R/P HEAD,ERASE HEAD
CS301
B MECHANISM CONTROL P.C.B.
CP301
5·1
4 2
1· · ·5

■ Type Illustration of IC's, Transistors and Diodes

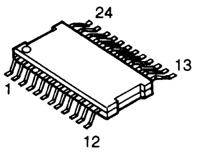
AN8835SBE1	28PIN
BH3857FV-E2	40PIN



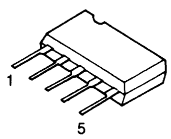
BA4558FE2



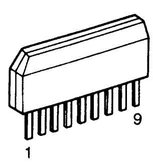
AN8389SE1



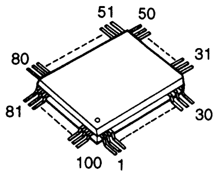
BA7755A



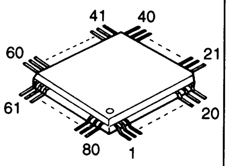
TA7291S



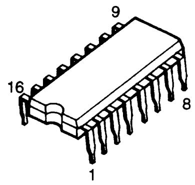
M38257M8087F


51
50
80
31
81
30
100
1

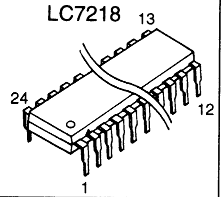
MN662741RPA


41
40
60
21
61
20
80
1

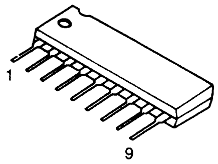
TA8142AP



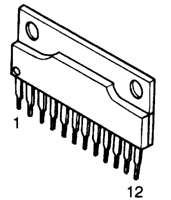
LA1832A
LC7218



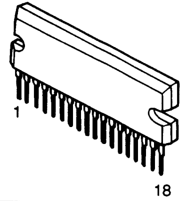
BA6283N



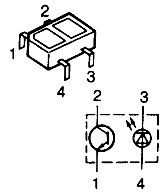
AN7135

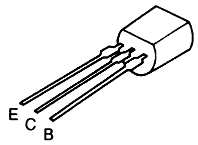


LA4705NA



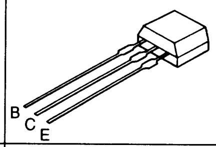
ON2180RLC





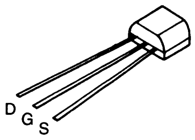
2SA952LTA
2SC1845FTA
2SC2001KTA
2SC2001LTA
2SD965RTA

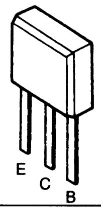
2SC1740SLNST
2SC1740SSTA
RVTDTA114EST



RVTDTA114YST
RVTDTA143TST
RVTDTA143XST
RVTDTA144EST
RVTDTC114EST
RVTDTC114TST
RVTDTC124TST
RVTDTC143XST
RVTDTC144EST

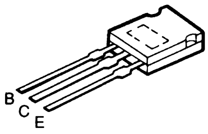
2SJ40CDTA



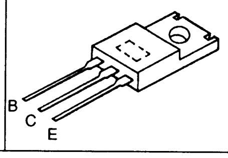


2SB1030RTA
2SC2785FETA
2SC2785FTA
2SC2787LTA

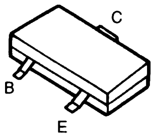
2SD2037ETA



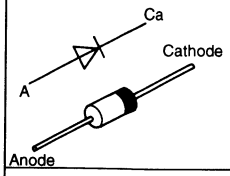
2SB1566E

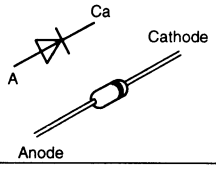


2SB709STX

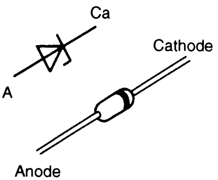


1N5402BM21
RL1N4003N02


Ca
Cathode
A
Anode

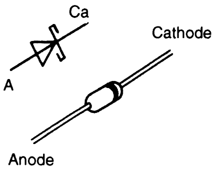

Ca
Cathode
A
Anode

1SS254TA
1SS291TA
MA165TA

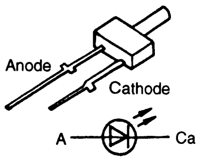

Ca
Cathode
A
Anode

MTZJ3R0BTA
MTZJ5R1BTA
MTZJ5R1CTA
MTZJ5R6ATA
MTZJ6R8ATA
MTZJ8R2BTA
MTZJ9R1BTA
MTZJ15CTA

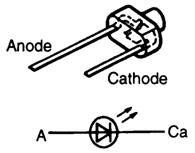
RB441QT-77


Ca
Cathode
A
Anode

LN282RPXVTX2

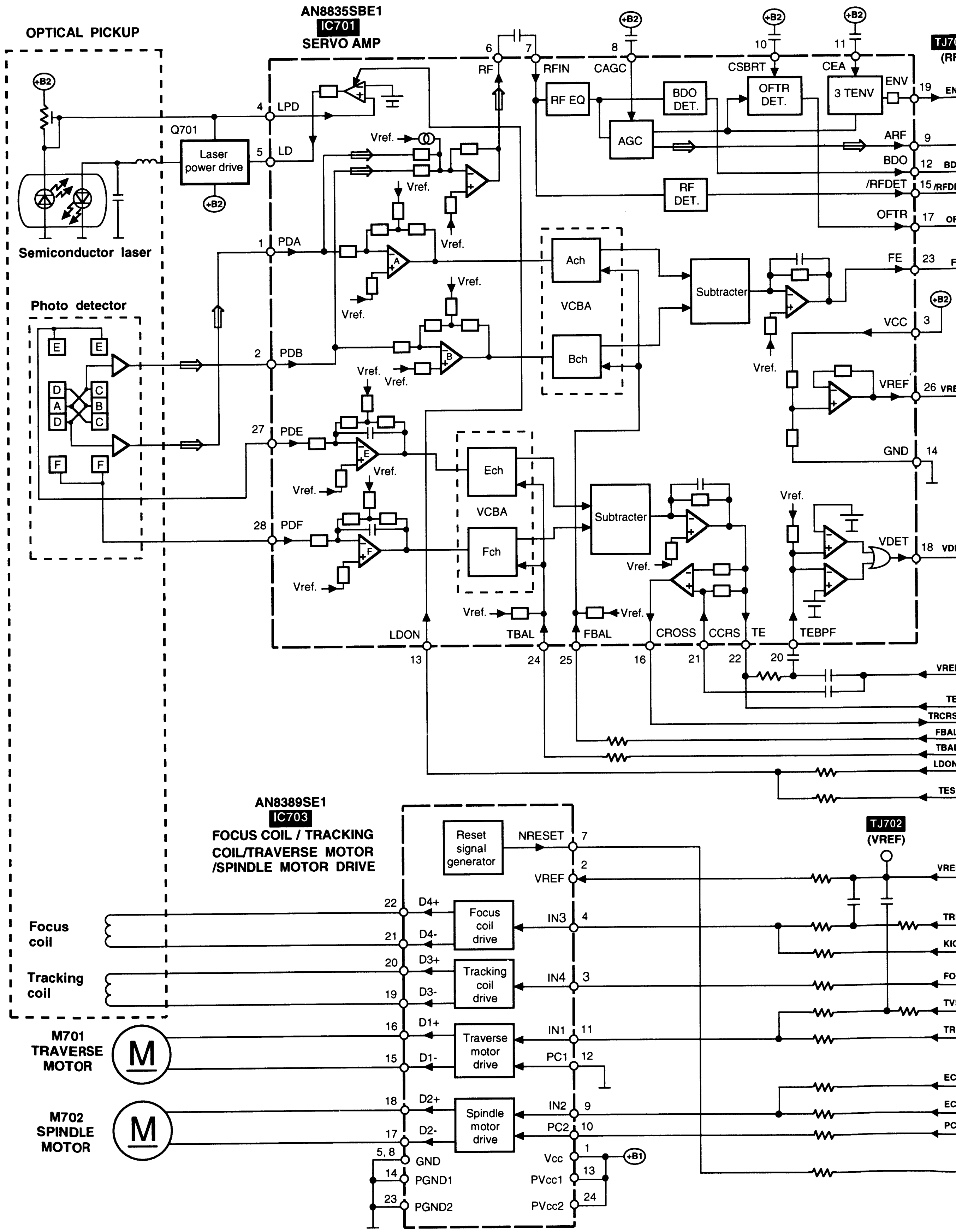

Anode
Cathode
A
Ca

LNJ301MPUJAD

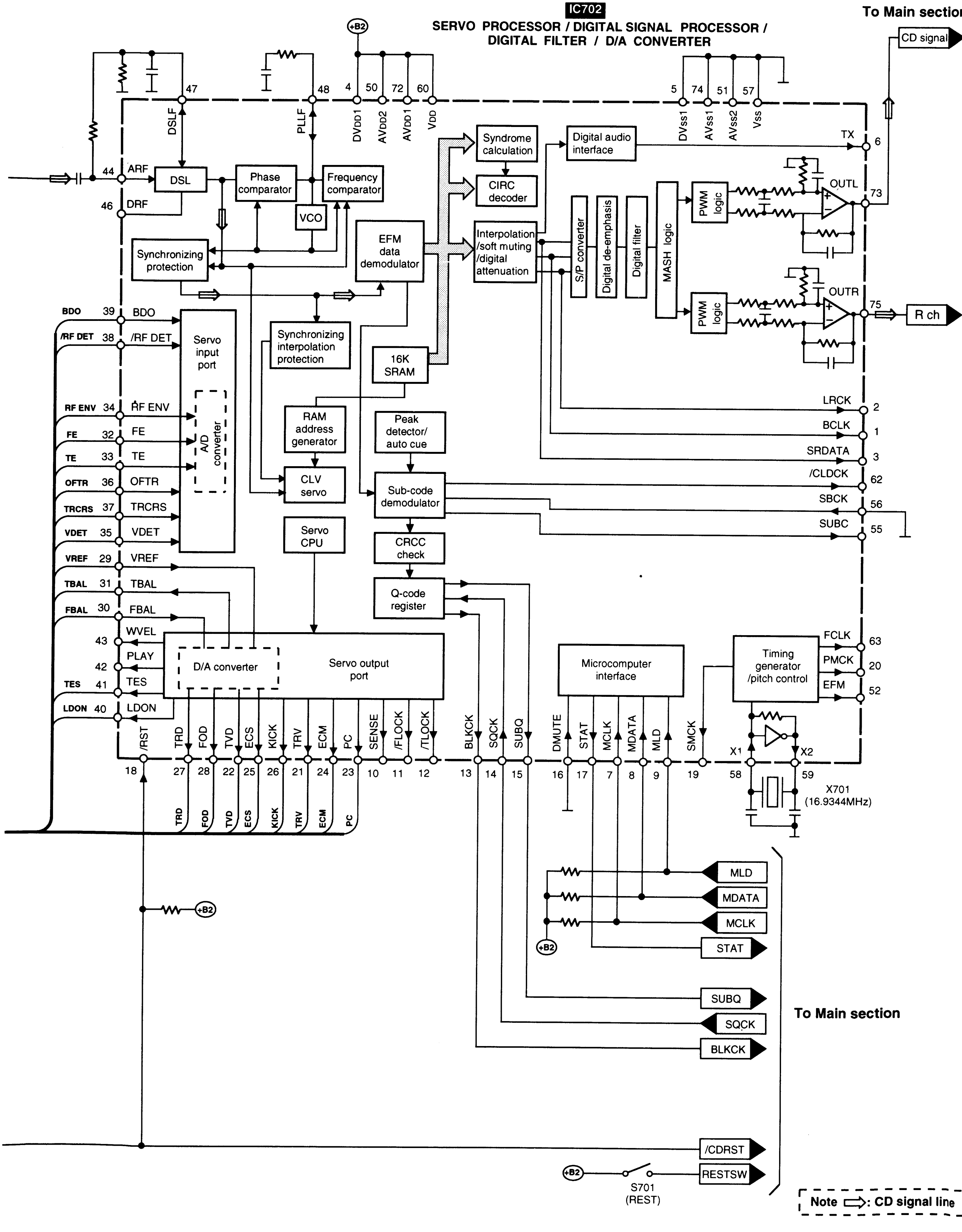

Anode
Cathode
A
Ca

Block Diagram

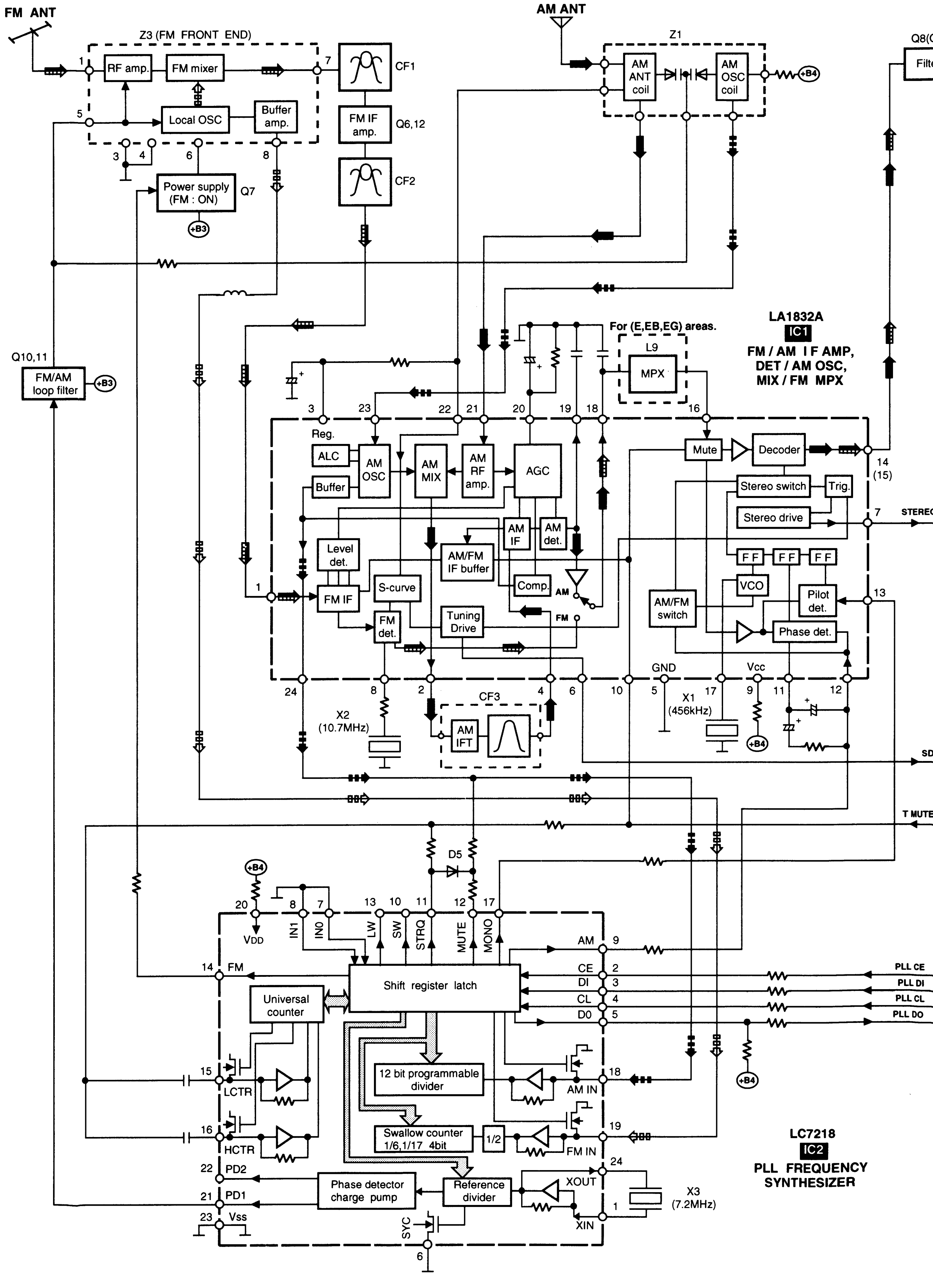
CD player section

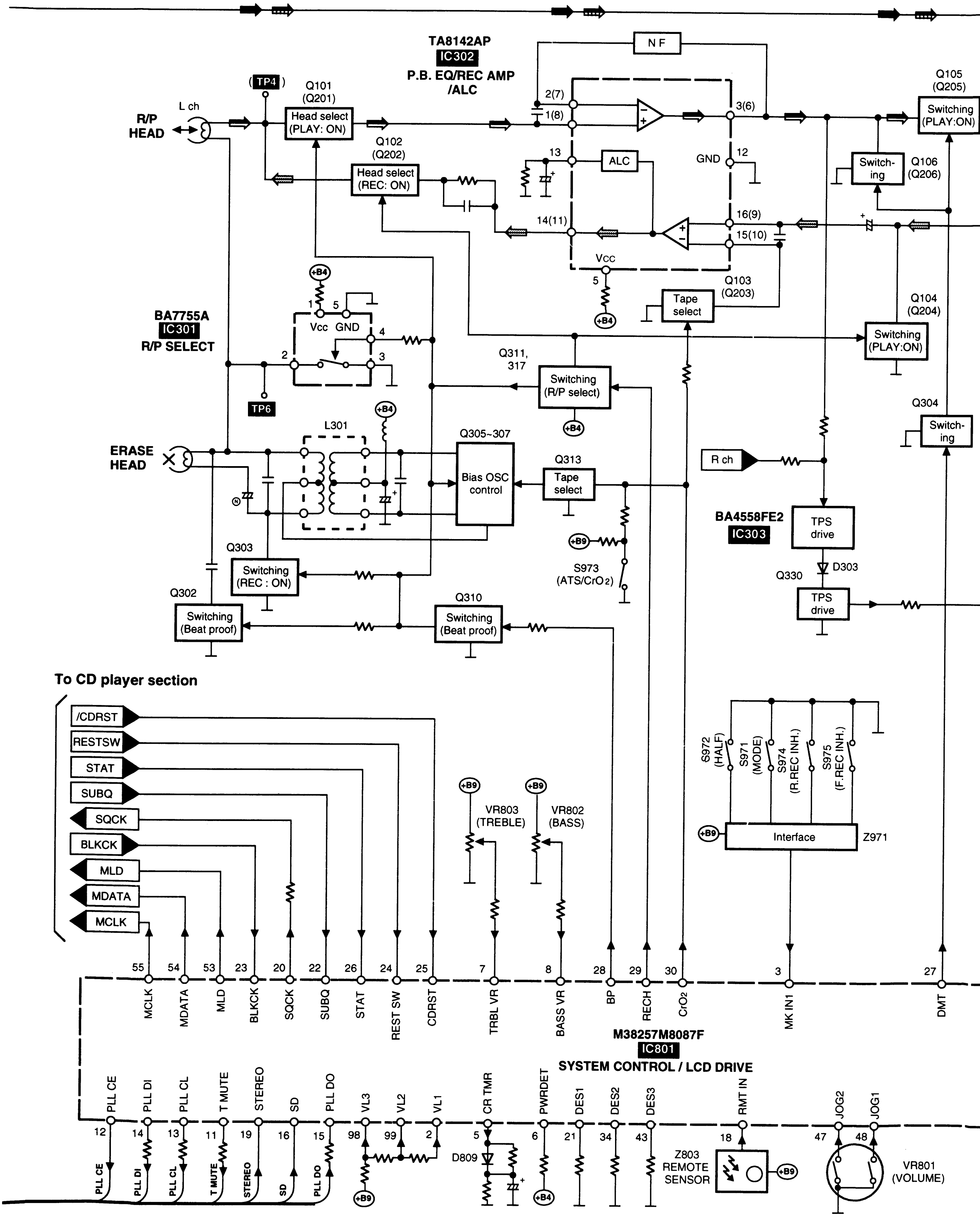

OPTICAL PICKUP
AN8835SBE1
IC701
SERVO AMP
+B2
Q701
Laser power drive
Semiconductor laser
Photo detector
E E D A D C B C F F
4 LPD
5 LD
1 PDA
2 PDB
27 PDE
28 PDF
6 RF
7 RFIN
8 CAGC
10 CSBRT
11 CEA
RF EQ
AGC
BDO DET.
OFTR DET.
3 TENV
RF DET.
ENV 19
ARF 9
BDO 12
/RFDET 15
OFTR 17
FE 23
VCC 3
VREF 26
GND 14
VDET 18
Vref.
Ach
Bch
VCBA
Ech
Fch
Subtracter
LDON 13
TBAL 24
FBAL 25
CROSS 16
CCRS 21
TE 22
TEBPF 20
TJ70
VREF
TE
TRCRS
FBAL
TBAL
LDON
TES
AN8389SE1
IC703
FOCUS COIL / TRACKING COIL/TRAVERSE MOTOR /SPINDLE MOTOR DRIVE
Reset signal generator
NRESET 7
VREF 2
IN3 4
IN4 3
IN1 11
PC1 12
IN2 9
PC2 10
Vcc 1
PVcc1 13
PVcc2 24
+B1
22 D4+
21 D4-
20 D3+
19 D3-
16 D1+
15 D1-
18 D2+
17 D2-
5, 8 GND
14 PGND1
23 PGND2
Focus coil drive
Tracking coil drive
Traverse motor drive
Spindle motor drive
Focus coil
Tracking coil
M701 TRAVERSE MOTOR
M702 SPINDLE MOTOR
M
TJ702 (VREF)

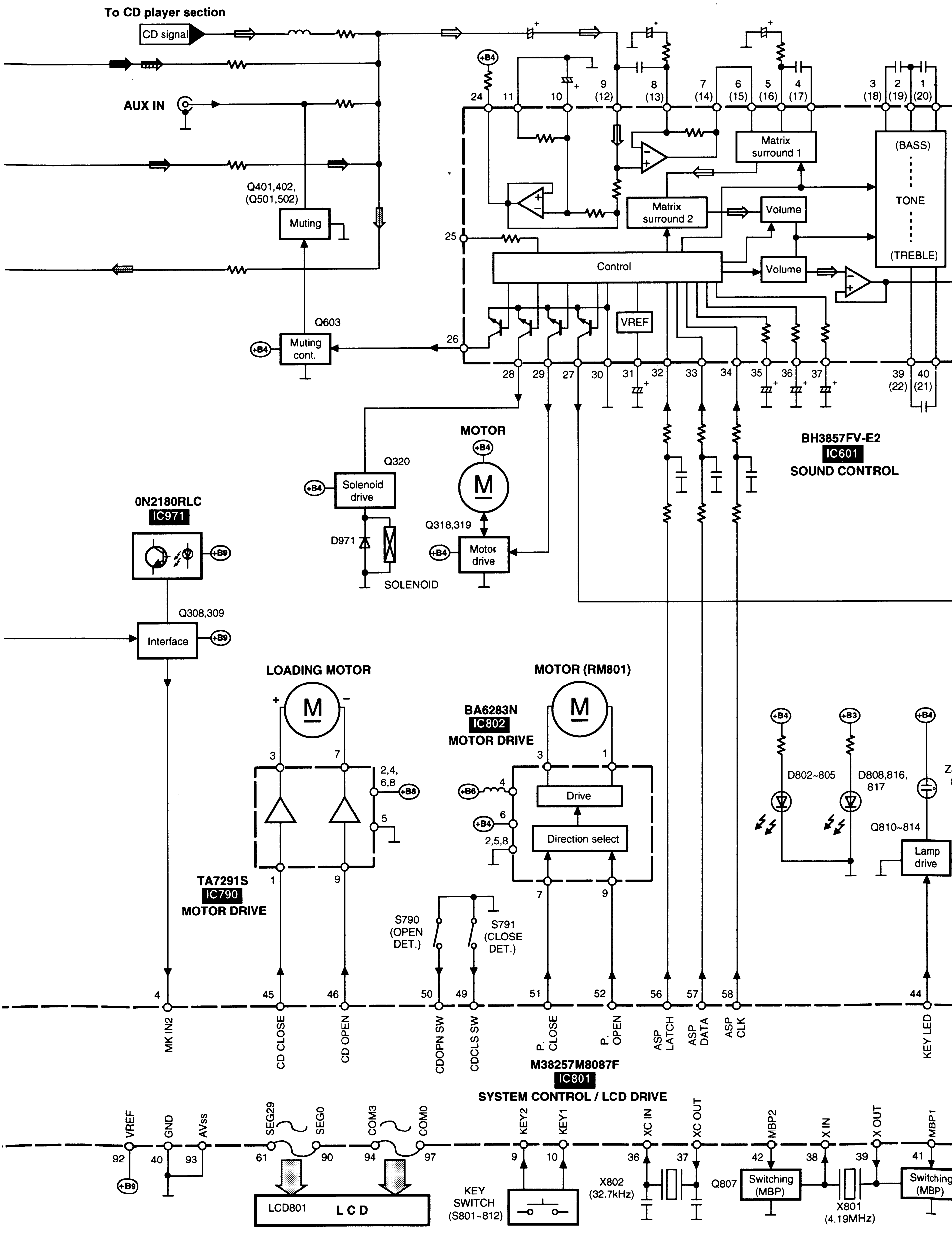
MN662741RPA
IC702
SERVO PROCESSOR / DIGITAL SIGNAL PROCESSOR / DIGITAL FILTER / D/A CONVERTER

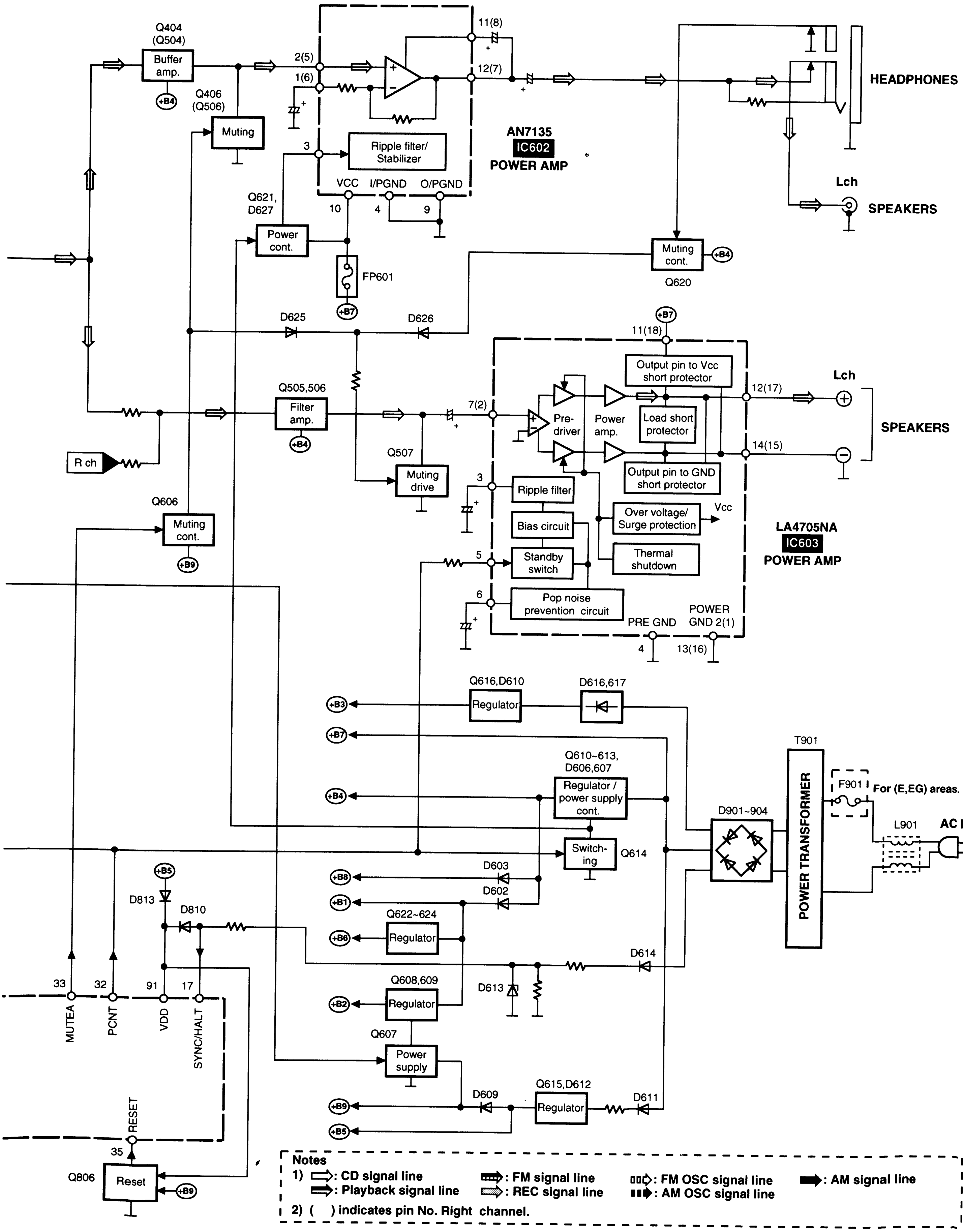

To Main section
CD signal
+B2
47
48
4
50
72
60
5
74
51
57
DSLF
PLLF
DVDD1
AVDD2
AVDD1
VDD
DVss1
AVss1
AVss2
Vss
44
ARF
46
DRF
DSL
Phase comparator
Frequency comparator
VCO
Synchronizing protection
EFM data demodulator
Syndrome calculation
CIRC decoder
Interpolation /soft muting /digital attenuation
Digital audio interface
TX
6
S/P converter
Digital de-emphasis
Digital filter
MASH logic
PWM logic
OUTL
73
OUTR
75
R ch
Synchronizing interpolation protection
16K SRAM
RAM address generator
Peak detector/ auto cue
CLV servo
Sub-code demodulator
Servo CPU
CRCC check
Q-code register
Servo input port
A/D converter
BDO 39 BDO
/RF DET 38 /RF DET
RF ENV 34 RF ENV
FE 32 FE
TE 33 TE
OFTR 36 OFTR
TRCRS 37 TRCRS
VDET 35 VDET
VREF 29 VREF
TBAL 31 TBAL
FBAL 30 FBAL
43 WVEL
42 PLAY
TES 41 TES
LDON 40 LDON
D/A converter
Servo output port
LRCK 2
BCLK 1
SRDATA 3
/CLDCK 62
SBCK 56
SUBC 55
Microcomputer interface
Timing generator /pitch control
FCLK 63
PMCK 20
EFM 52
/RST
TRD
FOD
TVD
ECS
KICK
TRV
ECM
PC
SENSE
/FLOCK
/TLOCK
BLKCK
SQCK
SUBQ
DMUTE
STAT
MCLK
MDATA
MLD
SMCK
X1
X2
18
27
28
22
25
26
21
24
23
10
11
12
13
14
15
16
17
7
8
9
19
58
59
X701 (16.9344MHz)
TRD
FOD
TVD
ECS
KICK
TRV
ECM
PC
MLD
MDATA
MCLK
STAT
SUBQ
SQCK
BLKCK
To Main section
/CDRST
RESTSW
S701 (REST)
Note ⇨: CD signal line

● Main section


FM ANT
Z3 (FM FRONT END)
RF amp.
FM mixer
Local OSC
Buffer amp.
Power supply (FM : ON)
Q7
+B3
CF1
FM IF amp.
Q6,12
CF2
AM ANT
Z1
AM ANT coil
AM OSC coil
+B4
Q8(
Filte
Q10,11
FM/AM loop filter
+B3
For (E,EB,EG) areas.
L9
MPX
LA1832A
IC1
FM / AM I F AMP, DET / AM OSC, MIX / FM MPX
Reg.
ALC
Buffer
AM OSC
AM MIX
AM RF amp.
AGC
Mute
Decoder
Stereo switch
Trig.
Stereo drive
AM IF
AM det.
Level det.
AM/FM IF buffer
Comp.
AM
FM
S-curve
FM IF
FM det.
Tuning Drive
AM/FM switch
FF
FF
FF
VCO
Pilot det.
Phase det.
GND
Vcc
X2 (10.7MHz)
CF3
AM IFT
X1 (456kHz)
+B4
STEREO
SD
T MUTE
D5
+B4
VDD
IN1
IN0
LW
SW
STRQ
MUTE
MONO
FM
AM
CE
DI
CL
DO
Shift register latch
Universal counter
12 bit programmable divider
Swallow counter 1/6,1/17 4bit
1/2
AM IN
FM IN
LCTR
HCTR
PD2
PD1
Vss
Phase detector charge pump
Reference divider
XOUT
XIN
SYC
X3 (7.2MHz)
PLL CE
PLL DI
PLL CL
PLL DO
+B4
LC7218
IC2
PLL FREQUENCY SYNTHESIZER


TA8142AP
IC302
P.B. EQ/REC AMP
/ALC
N F
(TP4)
Q101
(Q201)
Head select
(PLAY: ON)
L ch
R/P
HEAD
Q102
(Q202)
Head select
(REC: ON)
2(7)
1(8)
3(6)
13
ALC
GND
12
14(11)
16(9)
15(10)
Vcc
5
Q105
(Q205)
Switching
(PLAY:ON)
Switch-
ing
Q106
(Q206)
Q103
(Q203)
Tape
select
Q104
(Q204)
Switching
(PLAY:ON)
+B4
BA7755A
IC301
R/P SELECT
1
5
Vcc
GND
4
2
3
TP6
Q311,
317
Switching
(R/P select)
L301
Q305~307
Bias OSC
control
Q313
Tape
select
ERASE
HEAD
Q303
Switching
(REC : ON)
Q302
Switching
(Beat proof)
Q310
Switching
(Beat proof)
+B9
S973
(ATS/CrO2)
R ch
BA4558FE2
IC303
TPS
drive
D303
Q330
TPS
drive
Q304
Switch-
ing
To CD player section
/CDRST
RESTSW
STAT
SUBQ
SQCK
BLKCK
MLD
MDATA
MCLK
VR803
(TREBLE)
VR802
(BASS)
S972
(HALF)
S971
(MODE)
S974
(R.REC INH.)
S975
(F.REC INH.)
Interface
Z971
55
54
53
23
20
22
26
24
25
7
8
28
29
30
3
27
MCLK
MDATA
MLD
BLKCK
SQCK
SUBQ
STAT
REST SW
CDRST
TRBL VR
BASS VR
BP
RECH
CrO2
MK IN1
DMT
M38257M8087F
IC801
SYSTEM CONTROL / LCD DRIVE
PLL CE
PLL DI
PLL CL
T MUTE
STEREO
SD
PLL DO
VL3
VL2
VL1
CR TMR
PWRDET
DES1
DES2
DES3
RMT IN
JOG2
JOG1
12
14
13
11
19
16
15
98
99
2
5
6
21
34
43
18
47
48
D809
+B4
Z803
REMOTE
SENSOR
VR801
(VOLUME)
PLL CE
PLL DI
PLL CL
T MUTE
STEREO
SD
PLL DO


To CD player section
CD signal
AUX IN
Q401,402,
(Q501,502)
Muting
Q603
Muting cont.
+B4
24
11
10
9 (12)
8 (13)
7 (14)
6 (15)
5 (16)
4 (17)
3 (18)
2 (19)
1 (20)
25
26
Matrix surround 1
Matrix surround 2
Volume
Volume
Control
VREF
(BASS)
TONE
(TREBLE)
28
29
27
30
31
32
33
34
35
36
37
39 (22)
40 (21)
BH3857FV-E2
IC601
SOUND CONTROL
MOTOR
Q320
Solenoid drive
D971
SOLENOID
Q318,319
Motor drive
0N2180RLC
IC971
+B9
Q308,309
Interface
LOADING MOTOR
M
TA7291S
IC790
MOTOR DRIVE
2,4, 6,8
+B8
5
3
7
1
9
MOTOR (RM801)
BA6283N
IC802
MOTOR DRIVE
+B6
4
6
2,5,8
Drive
Direction select
S790 (OPEN DET.)
S791 (CLOSE DET.)
+B3
D802~805
D808,816, 817
Q810~814
Lamp drive
4
45
46
50
49
51
52
56
57
58
44
MK IN2
CD CLOSE
CD OPEN
CDOPN SW
CDCLS SW
P. CLOSE
P. OPEN
ASP LATCH
ASP DATA
ASP CLK
KEY LED
M38257M8087F
IC801
SYSTEM CONTROL / LCD DRIVE
VREF
GND
AVss
SEG29
SEG0
COM3
COM0
KEY2
KEY1
XC IN
XC OUT
MBP2
X IN
X OUT
MBP1
92
40
93
61
90
94
97
9
10
36
37
42
38
39
41
LCD801
L C D
KEY SWITCH (S801~812)
X802 (32.7kHz)
Q807
Switching (MBP)
X801 (4.19MHz)
Switching (MBP)


Q404
(Q504)
Buffer amp.
+B4
Q406
(Q506)
Muting
2(5)
1(6)
3
11(8)
12(7)
Ripple filter/ Stabilizer
VCC
I/PGND
O/PGND
10
4
9
AN7135
IC602
POWER AMP
Q621,
D627
Power cont.
FP601
+B7
D625
D626
Muting cont.
+B4
Q620
HEADPHONES
Lch
SPEAKERS
+B7
11(18)
Output pin to Vcc short protector
Q505,506
Filter amp.
+B4
7(2)
Pre-driver
Power amp.
Load short protector
12(17)
14(15)
Lch
SPEAKERS
R ch
Q507
Muting drive
Output pin to GND short protector
3
Ripple filter
Over voltage/ Surge protection
Vcc
Q606
Muting cont.
+B9
Bias circuit
LA4705NA
IC603
POWER AMP
5
Standby switch
Thermal shutdown
6
Pop noise prevention circuit
PRE GND
POWER GND 2(1)
4
13(16)
Q616,D610
D616,617
+B3
Regulator
+B7
T901
Q610~613,
D606,607
Regulator / power supply cont.
+B4
F901
For (E,EG) areas.
D901~904
POWER TRANSFORMER
L901
AC IN
Switch-ing
Q614
+B5
D603
+B8
D813
D810
D602
+B1
Q622~624
+B6
Regulator
D614
33
32
91
17
D613
Q608,609
+B2
Regulator
MUTEA
PCNT
VDD
SYNC/HALT
Q607
Power supply
Q615,D612
D609
D611
RESET
+B9
Regulator
+B5
35
Q806
Reset
+B9

Notes

1) ⇨: CD signal line ➡: FM signal line ⇨: FM OSC signal line ➡: AM signal line

➡: Playback signal line ⇨: REC signal line ▮▮➡: AM OSC signal line

2) ( ) indicates pin No. Right channel.

■ Replacement Parts List

Notes:

*Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

*The parenthesized indications in the Remarks columns specify the areas. (Refer to the co
page for area.)
Parts without these indications can be used for all areas.
*[M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
■	01	**CM NOTHING**	1	(RTL)
■	01	**CM NOTHING**	1	(RTL)
1	RFKGAPM15EGS	FRONT PANEL ASS'Y	1	[M]
1-1	RKA0059-K	LEG	2	[M]
2	REX0877Y	WIRE ASS'Y(6P/CW790)	1	[M]
3	RWJ1109210CQ	FLAT CABLE(9P/PW301)	1	[M]
4	RWJ1108300CC	FLAT CABLE(8P/PW303)	1	[M]
5	RWJ1106120CC	FLAT CABLE(6P/PW802)	1	[M]
6	RWJ1104180CC	FLAT CABLE(4P/PW803)	1	[M]
7	RWJ1104300CC	FLAT CABLE(4P/PW804)	1	[M]
8	REX0876	WIRE ASS'Y(5P/PW901)	1	[M]
9	XTV3+10F	SCREW	5	[M]
10	RGP0620-W	LCD SPACER SHEET	1	[M]
11	RMN0451	LCD HOLDER	1	[M]
12	REX0878Y	WIRE ASS'Y(4P/CW801)	1	[M]
13	REX0886Y	WIRE ASS'Y(7P/CW802)	1	[M]
14	RWJ1104110CC	FLAT CABLE(4P/PW805)	1	[M]
15	REX0875	WIRE ASS'Y(2P/W804)	1	[M]
16	RGP0616-Q	LCD PANEL	1	[M]
17	RGP0619-S	CASSETTE LID	1	[M]
18	RGW0267-S	KNOB, BASS/TREBLE	2	[M]
19	RGW0268-S	KNOB, VOLUME/TUNING	2	[M]
20	RHD30007-S	SCREW	4	[M]
21	RKA0059-K	LEG	2	[M]
22	RKM0355Z-S	TOP CABINET	1	[M]
23	RMR1129-K	WASHER	2	[M]
24	RGP0618-S	BUTTON PANEL	1	[M]
25	RGU1565-S	BUTTON, TIMER	1	[M]
26	RGU1566-S	BUTTON, OPEN/CLOSE	1	[M]
27	RGU1567-S	BUTTON, TUN/BAND	1	[M]
28	RGU1568-S	BUTTON, CASS EJ	1	[M]
29	RGU1569-S	BUTTON, POWER/CD	1	[M]
30	RGU1571-Q	BUTTON, CONTROL	1	[M]
31	RMK0369	BUTTON CHASSIS	1	[M]
32	RDG0402	RACK(L)	1	[M]
33	RDG0403	RACK(R)	1	[M]
34	RDG0404	GEAR	2	[M]
35	RDG0405	GEAR	1	[M]
36	RDK0032	CAM	1	[M]
37	RHD26016	SCREW	2	[M]
38	RMB0533	SPRING	1	[M]
39	RMK0368	SLIDE PANEL CHASSIS	1	[M]
40	RMS0596	GUIDE SHAFT	2	[M]
41	RMS0597	MAIN SHAFT	1	[M]
42	RDP0056	PULLEY	1	[M]
43	RMG0158	BELT	1	[M]
44	RMR1095-W	GEAR FIXTUR	1	[M]
45	XQN2+C3	SCREW	2	[M]
46	RMB0477	SPRING	1	[M]
47	RYP0790-S	SLID PANEL UNIT	1	[M]
47-1	RMA1089	SLIDE MECH ANGLE	1	[M]
47-2	XTV26+6G	SCREW	5	[M]
48	XTBS26+10J	SCREW	20	[M]
49	XTV3+10G	SCREW	4	[M]
50	REE0799	FFC	1	[M]
51	REE0800	FFC	1	[M]
52	RGK0929-S	CD TRAY LID	1	[M]
53	RFKHAPM15E-S	REAR CABINET ASS'Y	1	[M]E
53	RFKHAPM15EBS	REAR CABINET ASS'Y	1	[M]EB
53	RKS0270-K	REAR CABINET ASS'Y	1	[M]EG
53	RFKHAPM15GNS	REAR CABINET ASS'Y	1	[M]GN
54	RMK0370	BOTTOM CHASSIS	1	[M]
55	REQ0191	SUPPORTER	1	[M]
56	XTB3+10JFZ	SCREW	25	[M]
57	RFKPAPM15EGS	MOTOR ASS'Y	1	[M]
58	RFKLAPM15EGS	CASSETTE LID ASS'Y	1	[M]
58-1	RUS757ZAA	SPRING	2	[M]
62	RDG0357	GEAR	1	[M]
A1	EUR644851	REMOTE CONTROLLER	1	[M]
⚠ A2	RJA0019-2K	AC POWER CORD	1	[M]E, EG
⚠ A2	RJA0036-K	AC POWER CORD	1	[M]GN
⚠ A2	VJA0733	AC POWER CORD	1	[M]EB
A3	RQA0117	WARRANTY CARD	1	[M]E, EB, EG
A3	RQX7433ZA	WARRANTY CARD	1	[M]GN
A4	RQCB0169	SERVICE CENTERLIST	1	[M]
A5	RQT4047-G	OPERATING INSTRUCTIONS	1	[M]EG
A5	RQT4051-E	OPERATING INSTRUCTIONS	1	[M]E
A5	RQT4053-B	OPERATING INSTRUCTIONS	1	[M]EB, GN
A6	RQT4052-R	OPERATING INSTRUCTIONS	1	[M]E
A6	RQT4078-H	OPERATING INSTRUCTIONS	1	[M]EG
A7	RSA0006	FM ANT	1	[M]GN
A7	RSA0007	FM ANT	1	[M]E, EB, EG
A8	RSA0022	AM LOOP ANT	1	[M]
C15	ECBT1C103MS5	16V 0.01U	1	[M]
C16	ECA1CM220B	16V 22uF	1	[M]
C17	ECBT1C103MS5	16V 0.01U	1	[M]
C18	ECBT1H102KB5	50V 1000P	1	[M]
C19	ECBT1C103MS5	16V 0.01U	1	[M]
C20	RCE1HKA3R3BG	50V 3.3uF	1	[M]
C21	ECA1CM101B	16V 100UF	1	[M]
C22	ECBT1C103MS5	16V 0.01U	1	[M]
C23	ECA1CM220B	16V 22uF	1	[M]
C24	ECBT1H473ZF5	50V 0.047U	1	[M]
C25	RCE1HKA4R7BG	50V 4.7uF	1	[M]
C26	ECBT1C822MR5	16V 8200pF	1	[M]
C27	ECQP2A821JZT	100V 820pF	1	[M]
C28	ECEA1HKA010B	50V 1U	1	[M]
C29, 30	ECFR1C103KR	16V 0.01U	2	[M]
C31	ECBT1H150JC5	50V 15P	1	[M]
C32	ECBT1C103MS5	16V 0.01U	1	[M]
C33	ECEA1HKA2R2B	50V 2.2U	1	[M]
C34-37	ECEA1HKA010B	50V 1U	4	[M]
C38, 39	ECBT1C822MR5	16V 8200pF	2	[M]
C40, 41	ECBT1H561KB5	50V 560P	2	[M]
C42, 43	ECBT1C562MR5	16V 5600pF	2	[M]
C44	ECA1CM101B	16V 100UF	1	[M]
C45, 46	ECEA1HKA010B	50V 1U	2	[M]
C47	ECBT1H473ZF5	50V 0.047U	1	[M]
C48	ECBT1H100JC5	50V 10P	1	[M]E, EB, EG
C48	ECBT1H8R2KC5	50V 8.2P	1	[M]GN
C49	ECBT1H331KB5	50V 330P	1	[M]E, EB, EG
C51	ECBT1C103MS5	16V 0.01U	1	[M]
C52	ECEA1EU4R7B	25V 4.7uF	1	[M]
C53	ECBT1C103MS5	16V 0.01U	1	[M]
C54	ECBT1H180JC5	50V 18P	1	[M]
C55	ECBT1H150JC5	50V 15P	1	[M]
C56	ECBT1H102KB5	50V 1000P	1	[M]
C57	ECA1CM101B	16V 100UF	1	[M]
C59	ECBT1H330J5	50V 33P	1	[M]
C60	ECBT1H102KB5	50V 1000P	1	[M]
C61	ECBT1H331KB5	50V 330P	1	[M]
C62	ECA1CM220B	16V 22uF	1	[M]
C63, 64	ECBT1C103MS5	16V 0.01U	2	[M]
C65-68	ECBT1H102KB5	50V 1000P	4	[M]E, EB, EG
C71	ECBT1H331KB5	50V 330P	1	[M]
C72	ECBT1H471KB5	50V 470P	1	[M]E, EB, EG
C73	ECBT1H2R7KC5	50V 2.7pF	1	[M]E, EB, EG
C102	ECBT1C152KR5	16V 1500P	1	[M]
C103	ECEA0JKA470B	6.3V 47UF	1	[M]
C104	ECBT1H331KB5	50V 330P	1	[M]
C105	ECFR1C153KR	16V 0.015UF	1	[M]
C106	ECEA1EKA4R7B	25V 4.7uF	1	[M]
C107	ECEA1HKA010B	50V 1U	1	[M]
C108	ECEA0JKA470B	6.3V 47UF	1	[M]
C111	ECEA1EKA4R7B	25V 4.7uF	1	[M]
C112-14	ECBT1H102KB5	50V 1000P	3	[M]
C115	ECBT1H101KB5	50V 100P	1	[M]
C202	ECBT1C152KR5	16V 1500PF	1	[M]
C203	ECEA0JKA470B	6.3V 47UF	1	[M]
C204	ECBT1H331KB5	50V 330P	1	[M]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C205	ECFR1C153KR	16V 0. 015UF	1	[M]
C206	ECEA1EKA4R7B	25V 4. 7uF	1	[M]
C207	ECEA1HKA010B	50V 1U	1	[M]
C208	ECEA0JKA470B	6. 3V 47UF	1	[M]
C211	ECEA1EKA4R7B	25V 4. 7uF	1	[M]
C212-14	ECBT1H102KB5	50V 1000P	3	[M]
C215	ECBT1H101KB5	50V 100P	1	[M]
C301	ECEA1HN010SB	50V 1U	1	[M]
C303	ECBT1C103MS5	16V 0. 01U	1	[M]
C305	ECQP2A102JZT	100V 1000pF	1	[M]
C306	ECQP2A472JZT	100V 4700pF	1	[M]
C307	ECEA1HKA010B	50V 1U	1	[M]
C308	ECA1CM101B	16V 100UF	1	[M]
C309	ECQV1H473JM3	50V 0. 047uF	1	[M]
C310, 11	ECBT1H102KB5	50V 1000P	2	[M]
C312, 13	ECBT1C222MR5	16V 2200pF	2	[M]
C314	ECBT1C332MR5	16V 3300P	1	[M]
C315	ECEA1CKA100B	16V 10U	1	[M]
C316	ECFR1C104KR	16V 0. 1UF	1	[M]
C317	ECBT1H470J5	50V 47P	1	[M]
C318	ECEA1HKA3R3B	50V 3. 3U	1	[M]
C319	ECEA1AKA221B	10V 220uF	1	[M]
C320, 21	ECEA1AKA220B	10V 22U	2	[M]
C322	ECEA0JKA470B	6. 3V 47UF	1	[M]
C323	ECBT1C103MS5	16V 0. 01U	1	[M]
C324	ECBT1C472MR5	16V 4700P	1	[M]
C326	ECEA1CKA100B	16V 10U	1	[M]
C401, 02	ECBT1H101KB5	50V 100P	2	[M]E, EB, EG
C404	ECEA1CKA100B	16V 10U	1	[M]
C406	ECBT1H221KB5	50V 220P	1	[M]
C407	ECEA1CKA470B	16V 47UF	1	[M]
C408	ECBT1H102KBS	50V 1000P	1	[M]
C409	ECEA1HKAR22B	50V 0. 22U	1	[M]
C410, 11	ECFR1C223MR	16V 0. 022U	2	[M]
C413, 14	ECQV1H154JM3	50V 0. 15UF	2	[M]
C415	ECBT1H471KB5	50V 470P	1	[M]
C416	ECEA1CKA100B	16V 10U	1	[M]
C423	ECEA1CKA100B	16V 10U	1	[M]
C424	ECBT1H471KB5	50V 470P	1	[M]
C425	ECA1CM471B	16V 470UF	1	[M]
C427	ECA1CM221B	16V 220UF	1	[M]
C428, 29	ECBT1H473ZF5	50V 0. 047U	2	[M]
C430	ECEA1HKA2R2B	50V 2. 2U	1	[M]
C431	ECBT1H102KB5	50V 1000P	1	[M]
C432, 33	ECFR1E104MR	25V 0. 1UF	2	[M]
C435	ECBT1H473ZF5	50V 0. 047U	1	[M]
C437, 38	ECEA1CKA101B	16V 100U	2	[M]
C439	ECQV1H224JM3	50V 0. 22UF	1	[M]
C440	ECBT1H821KB5	50V 820P	1	[M]
C444	ECFR1C153KR	16V 0. 015UF	1	[M]
C501, 02	ECBT1H101KB5	50V 100P	2	[M]E, EB, EG
C504	ECEA1CKA100B	16V 10U	1	[M]
C506	ECBT1H221KB5	50V 220P	1	[M]
C508	ECBT1H102KB5	50V 1000P	1	[M]
C509	ECEA1HKAR22B	50V 0. 22U	1	[M]
C510, 11	ECFR1C223MR	16V 0. 022U	2	[M]
C512	ECEA1CKA100B	16V 10U	1	[M]
C513, 14	ECQV1H154JM3	50V 0. 15UF	2	[M]
C515	ECBT1H471KB5	50V 470P	1	[M]
C516	ECEA1CKA100B	16V 10U	1	[M]
C518	ECQV1H154JM3	50V 0. 15UF	1	[M]
C519	ECFR1C473MR	16V 0. 047U	1	[M]
C520	ECBT1H471KB5	50V 470P	1	[M]
C521	ECEA1CKA100B	16V 10U	1	[M]
C523	ECEA1CKA100B	16V 10U	1	[M]
C524	ECBT1H471KB5	50V 470P	1	[M]
C525	ECA1CM471B	16V 470UF	1	[M]
C527	ECA1CM221B	16V 220UF	1	[M]
C528, 29	ECBT1H473ZF5	50V 0. 047U	2	[M]E, EB, EG
C530	ECEA1HKA2R2B	50V 2. 2U	1	[M]
C531	ECBT1H102KB5	50V 1000P	1	[M]
C532, 33	ECFR1E104MR	25V 0. 1UF	2	[M]
C535	ECBT1H473ZF5	50V 0. 047U	1	[M]E, EB, EG
C537, 38	ECEA1CKA101B	16V 100U	2	[M]
C539	ECQV1H224JM3	50V 0. 22U	1	[M]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C540	ECBT1H821KB5	50V 820P	1	[M]
C541	ECBT1H331KB5	50V 330P	1	[M]
C542	ECEA1CKA100B	16V 10U	1	[M]
C544	ECFR1C153KR	16V 0. 015UF	1	[M]
C606	ECEA1CKA100B	16V 10U	1	[M]
C607	ECEA1HKAR33B	50V 0. 33UF	1	[M]
C608-10	ECEA1HKA010B	50V 1U	3	[M]
C611	ECEA1CKA101B	16V 100U	1	[M]
C613	ECA1CM471B	16V 470UF	1	[M]
C615	ECEA1AKA220B	10V 22U	1	[M]
C616	ECA1EM471B	25V 22UF	1	[M]
C617	ECEA1AKA220B	10V 22U	1	[M]
C618	ECA1EM331B	25V 330UF	1	[M]
C620	ECEA1CKA101B	16V 100U	1	[M]
C621	ECEA1CKA330B	16V 33UF	1	[M]
C622	ECEA1HKA010B	50V 1U	1	[M]
C624, 25	ECEA1CKA100B	16V 10U	2	[M]
C626	ECA1CM221B	16V 220UF	1	[M]
⚠ C628	ECA1EM682E	25V 6800UF	1	[M]
C629	ECBT1C103MS5	16V 0. 01U	1	[M]
C630	ECEA1CKA470B	16V 47UF	1	[M]
C631	ECA1EM471B	25V 22UF	1	[M]
C632, 33	ECA1EM221B	25V 220UF	2	[M]
C635	ECBT1H102KB5	50V 1000P	1	[M]
C636	ECBT1H330J5	50V 33P	1	[M]
C637, 38	ECBT1H102KB5	50V 1000P	2	[M]
C639	ECBT1C103MS5	16V 0. 01U	1	[M]
C640	ECEA1CKA470B	16V 47UF	1	[M]
C642-44	ECBT1H101KB5	50V 100P	3	[M]
C645	ECA1AM471B	16V 470UF	1	[M]
C646	ECBT1C103MS5	16V 0. 01U	1	[M]
C647	ECBT1H221KB5	50V 220P	1	[M]
C648, 49	ECA1EM221B	25V 220UF	2	[M]
C790	ECA1AKF820E	10V 82U	1	[M]
C801	ECBT1H102KB5	50V 1000P	1	[M]
C806, 07	ECA0JM102B	6. 3V 1000UF	2	[M]
C809	ECEA0JKA470B	6. 3V 47UF	1	[M]
C810-17	ECBT1H561KB5	50V 560P	8	[M]
C818	ECBT1H101KB5	50V 100P	1	[M]
C819	ECBT1C103MS5	16V 0. 01U	1	[M]
C820, 21	ECBT1H180JC5	50V 180P	2	[M]
C822-25	ECBT1H680J5	50V 68P	4	[M]
C826, 27	ECBT1H102KB5	50V 1000P	2	[M]
C828-30	ECBT1H101KB5	50V 100P	3	[M]
C831, 32	ECEA1HKA010B	50V 1U	2	[M]
C833	ECBT1C103MS5	16V 0. 01U	1	[M]
C836	ECA1AM331B	10V 330UF	1	[M]
C837	ECA1CM101B	16V 100UF	1	[M]
C838-40	ECBT1H331KB5	50V 330P	3	[M]
C901-04	ECKR1H103ZF5	50V 0. 01U	4	[M]
C905	ECQV1H154JM3	50V 0. 15UF	1	[M]
CF1	RLFFETMGD01L	CERAMIC FILTER	1	[M]E, EB, EG
CF1	RLFFETWND01M	CERAMIC FILTER	1	[M]GN
CF2	RLFFETNGD01L	CERAMIC FILTER	1	[M]E, EB, EG
CF2	RLFFETWND01M	CERAMIC FILTER	1	[M]GN
CP301	RJS1A6805-1	CONNECTOR (5P)	1	[M]
CP801	SJTD413	CONNECTOR (4P)	1	[M]
CP802	RJP7G18ZA	CONNECTOR (7P)	1	[M]
CP804	RJT029W02V-1	CONNECTOR (2P)	1	[M]
CP902	RJT071H09A	CONNECTOR (9P)	1	[M]
CS301	RJS9T7ZA	CONNECTOR (9P)	1	[M]
CS303	RJS1A5208	CONNECTOR (8P)	1	[M]
CS702	RJS1A6823-J	CONNECTOR (23P)	1	[M]
CS801	RJS1A6830-J	CONNECTOR (30P)	1	[M]
CS802	RJS1A5206	CONNECTOR (6P)	1	[M]
CS901	RJT029W005	CONNECTOR (5P)	1	[M]
CS8011	RJS1A6830-J	CONNECTOR (30P)	1	[M]
⚠ D4	MTZJ5R1CTA	DIODE	1	[M]
D5	1SS254TA	DIODE	1	[M]
D301	1SS254TA	DIODE	1	[M]
D303	1SS254TA	DIODE	1	[M]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D602, 03	RL1N4003N02	DIODE	2	[M]
D605, 06	1SS254TA	DIODE	2	[M]
⚠ D607	MTZJ9R1BTA	DIODE	1	[M]
D609	1SS291TA	DIODE	1	[M]
⚠ D610	MTZJ15CTA	DIODE	1	[M]
⚠ D611	RL1N4003N02	DIODE	1	[M]
⚠ D612	MTZJ6R8ATA	DIODE	1	[M]
⚠ D613	MTZJ5R1BTA	DIODE	1	[M]
⚠ D614	RL1N4003N02	DIODE	1	[M]
⚠ D616	RL1N4003N02	DIODE	1	[M]
⚠ D617	RL1N4003N03	DIODE	1	[M]
D625, 26	1SS254TA	DIODE	2	[M]
D627	RB441QT77	DIODE	1	[M]
⚠ D631	MTZJ5R6ATA	DIODE	1	[M]
D802-05	LNJ301MPUJAD	LED	4	[M]
D808	LN282RPXVTX2	LED	1	[M]
D809	1SS254TA	DIODE	1	[M]
D810	1SS291TA	DIODE	1	[M]
D811	1SS254TA	DIODE	1	[M]
D813	1SS291TA	DIODE	1	[M]
D814	MTZJ3R0BTA	DIODE	1	[M]
D815	MTZJ8R2BTA	DIODE	1	[M]
D816, 17	LNJ301MPUJAD	LED	2	[M]
⚠ D901-04	1N5402B-M21	DIODE	4	[M]
D971	MA165TA	DIODE	1	[M]
⚠ F901	XBA2C06TB0	FUSE	1	[M]
FH901, 02	EYF52BC	FUSE HOLDER	2	[M]
⚠ FP601	RSFMB20KT-L	PROTECTOR	1	[M]
IC1	LA1832A	I. C	1	[M]
IC2	LC7218	I. C	1	[M]
IC301	BA7755A	I. C	1	[M]
IC302	TA8142AP	I. C	1	[M]
IC303	BA4558FE2	I. C	1	[M]
IC601	BH3857FV-E2	I. C	1	[M]
IC602	AN7135	I. C	1	[M]
IC603	LA4705NA	I. C	1	[M]
IC790	TA7291S	I. C	1	[M]
IC801	M38257M8087F	I. C	1	[M]
IC802	BA6283N	I. C	1	[M]
IC971	ON2180RLC	I. C	1	[M]
JK1	RJH5210M	ANTENNA	1	[M]E, EB, EG
JK1	RJH5404M	ANTENNA	1	[M]GN
JK601	RJH2206	RCA PIN (AUX)	1	[M]
JK602	RJH5410	SP. TERMINAL	1	[M]
JK603	RJJ39T01	HP JACK	1	[M]
JK604	RJH2208	RCA PIN (SP. TERM)	1	[M]
⚠ JK901	SJS9236	AC IN	1	[M]
L3	RLQZPR47KT-Y	COIL	1	[M]
L4, L5	ELEPKR68MA	COIL	2	[M]
L6, L7	ELELN822KL	COIL	2	[M]
L8	RLQZP1R0KT-Y	COIL	1	[M]
L9	SLM1B10-1M	COIL	1	[M]E, EB, EG
L301	RL08B003-K	BIAS COIL	1	[M]
L303	RLQA470JT1-Y	AXIAL COIL	1	[M]
L401	RLL500050T-Y	COIL	1	[M]
L501	RLL500050T-Y	COIL	1	[M]
L601	RLL500050T-Y	COIL	1	[M]
L804	RLQZB470KT-D	COIL	1	[M]
⚠ L901	RLQZ271M	COIL	1	[M]
LCD801	RSL5186-L	LCD	1	[M]
P1	RPG3538	GIFT BOX	1	[M]GN
P1	RPG3568	GIFT BOX	1	[M]EG
P1	RPG3581	GIFT BOX	1	[M]E
P1	RPG3582	GIFT BOX	1	[M]EB
P2	SPSD152	PAD	1	[M]
P3	XZB25X34C03X	POLYETHYLENE COVER	1	[M]
P4	RPH0192	SHEET	1	[M]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
P5	RPN1073	PAD	1	[M]
P6	RPN1064	PAD	1	[M]
Q6	2SC2787LTA	TRANSISTOR	1	[M]
Q7	RVTDTA114EST	TRANSISTOR	1	[M]
Q8, Q9	2SC1740SSTA	TRANSISTOR	2	[M]
Q10, 11	2SC2785FETA	TRANSISTOR	2	[M]
Q12	2SC2787LTA	TRANSISTOR	1	[M]
Q101, 02	2SJ40CDTA	TRANSISTOR	2	[M]
Q103, 04	2SC2785FTA	TRANSISTOR	2	[M]
Q105	2SJ40CDTA	TRANSISTOR	1	[M]
Q106	RVTDTC124TST	TRANSISTOR	1	[M]
Q201, 02	2SJ40CDTA	TRANSISTOR	2	[M]
Q203, 04	2SC2785FTA	TRANSISTOR	2	[M]
Q205	2SJ40CDTA	TRANSISTOR	1	[M]
Q206	RVTDTC124TST	TRANSISTOR	1	[M]
Q302	2SC1845FTA	TRANSISTOR	1	[M]
Q303	2SC2001LTA	TRANSISTOR	1	[M]
Q304	RVTDTC114TST	TRANSISTOR	1	[M]
Q305-09	2SC2785FTA	TRANSISTOR	5	[M]
Q310	RVTDTC114EST	TRANSISTOR	1	[M]
Q311	RVTDTC143XST	TRANSISTOR	1	[M]
Q313	2SC2785FTA	TRANSISTOR	1	[M]
Q317, 18	RVTDTA143XST	TRANSISTOR	2	[M]
Q319	2SD965RTA	FET	1	[M]
Q320	2SB1030RTA	TRANSISTOR	1	[M]
Q330	2SC2785FTA	TRANSISTOR	1	[M]
Q401, 02	2SC2785FTA	TRANSISTOR	2	[M]
Q404	2SC1740SLNST	TRANSISTOR	1	[M]
Q406	2SC2785FTA	TRANSISTOR	1	[M]
Q501, 02	2SC2785FTA	TRANSISTOR	2	[M]
Q504, 05	2SC1740SLNST	TRANSISTOR	2	[M]
Q506	2SC2785FTA	TRANSISTOR	1	[M]
Q507	2SC2001LTA	TRANSISTOR	1	[M]
Q508	2SC1740SLNST	TRANSISTOR	1	[M]
Q603	RVTDTA144EST	TRANSISTOR	1	[M]
Q606	RVTDTA114EST	TRANSISTOR	1	[M]
Q607	RVTDTA143XST	TRANSISTOR	1	[M]
⚠ Q608	2SC2785FTA	TRANSISTOR	1	[M]
⚠ Q609	2SA952LTA	TRANSISTOR	1	[M]
⚠ Q610	2SB1566E	TRANSISTOR	1	[M]
⚠ Q611	2SC2785FTA	TRANSISTOR	1	[M]
Q612	RVTDTA143TST	TRANSISTOR	1	[M]
Q613	RVTDTA114YST	TRANSISTOR	1	[M]
Q614	RVTDTC144EST	TRANSISTOR	1	[M]
⚠ Q615, 16	2SD2037ETA	TRANSISTOR	2	[M]
Q620	2SC2785FTA	TRANSISTOR	1	[M]
Q621	RVTDTA114EST	TRANSISTOR	1	[M]
Q622, 23	2SC2001KTA	TRANSISTOR	2	[M]
⚠ Q624	2SC2785FTA	TRANSISTOR	1	[M]
Q806	RVTDTC144EST	TRANSISTOR	1	[M]
Q807, 08	2SC2785FTA	TRANSISTOR	2	[M]
Q810	2SC2001KTA	TRANSISTOR	1	[M]
Q811	2SC2785FTA	TRANSISTOR	1	[M]
Q812	2SC2001KTA	TRANSISTOR	1	[M]
Q813	2SC2785FTA	TRANSISTOR	1	[M]
Q814	2SC2001KTA	TRANSISTOR	1	[M]
R15	ERDS2TJ101T	1/4W 100	1	[M]
R16	ERDS2TJ822T	1/4W 8.2K	1	[M]E, EB, EG
R17	ERDS2TJ331T	1/4W 330	1	[M]
R18	ERDS2TJ471T	1/4W 470	1	[M]
R19	ERDS2TJ474T	1/4W 470K	1	[M]E, EB, EG
R20	ERDS2TJ562T	1/4W 5.6K	1	[M]
R21	ERDS2TJ822T	1/4W 8.2K	1	[M]
R22	ERDS2TJ473T	1/4W 47K	1	[M]
R23	ERDS2TJ332T	1/4W 3.3K	1	[M]
R24	ERDS2TJ472T	1/4W 4.7K	1	[M]
R25	ERDS2TJ271T	1/4W 270	1	[M]
R26	ERDS2TJ471T	1/4W 470	1	[M]
R27	ERDS2FJ272	1/4W 2.7K	1	[M]
R28	ERDS2TJ473T	1/4W 47K	1	[M]
R29	ERDS2TJ101T	1/4W 100	1	[M]
R32, 33	ERDS2FJ272	1/4W 2.7K	2	[M]
R34, 35	ERDS2TJ103T	1/4W 10K	2	[M]

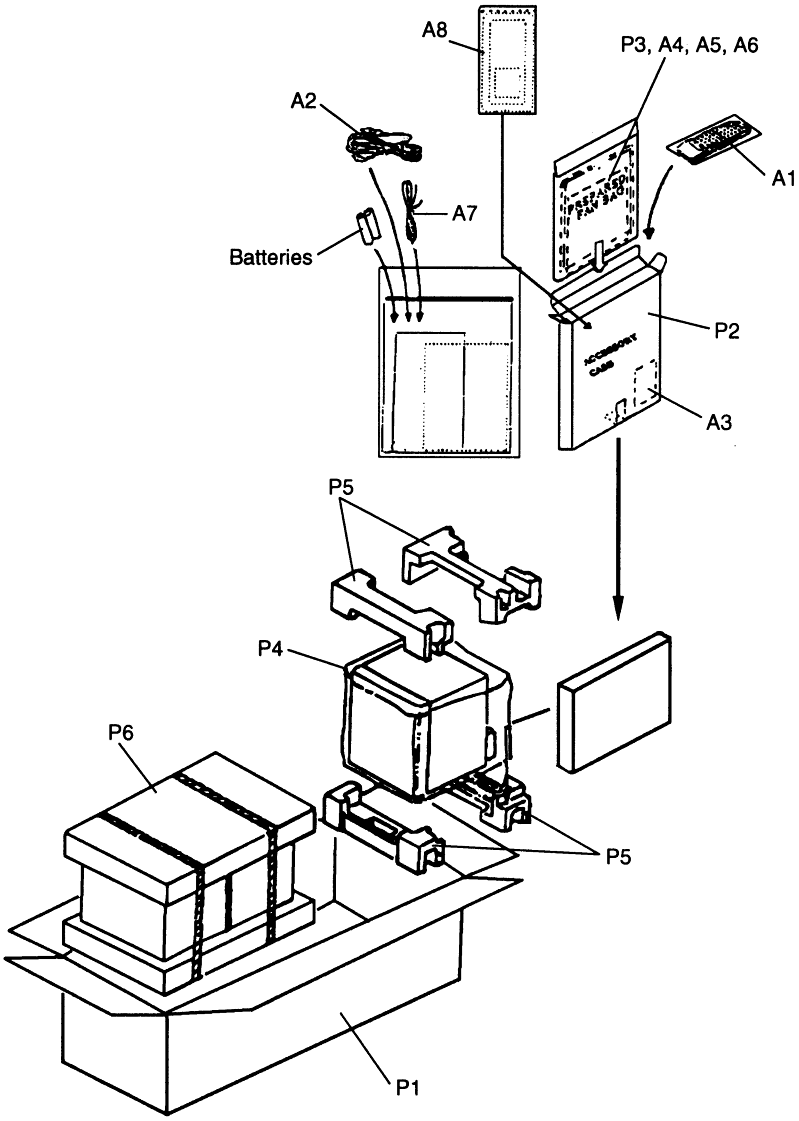
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R36, 37	ERDS2TJ474T	1/4W 470K	2	[M]
R38, 39	ERDS2TJ182T	1/4W 1. 8K	2	[M]
R40	ERDS2TJ391T	1/4W 390	1	[M]
R41, 42	ERDS2TJ273T	1/4W 27K	2	[M]
R43-45	ERDS2TJ102T	1/4W 1K	3	[M]
R46	ERDS2TJ104T	1/4W 100K	1	[M]
R47	ERDS2TJ562T	1/4W 5. 6K	1	[M]
R48	ERDS2TJ391T	1/4W 390	1	[M]
R49	ERDS2TJ561T	1/4W 560	1	[M]
R50	ERDS2TJ102T	1/4W 1K	1	[M]
R51	ERDS2TJ103T	1/4W 10K	1	[M]
R52-56	ERDS2TJ102T	1/4W 1K	5	[M]
R57, 58	ERDS2TJ103T	1/4W 10K	2	[M]
R60	ERDS2TJ563T	1/4W 56K	1	[M]
R61	ERDS2TJ102T	1/4W 1K	1	[M]
R63	ERDS2TJ103T	1/4W 10K	1	[M]
R64	ERDS2FJ680	1/4W 68	1	[M]
R65	ERDS2TJ103T	1/4W 10K	1	[M]
R76	ERDS2TJ331T	1/4W 330	1	[M]E, EB, EG
R77	ERDS2TJ474T	1/4W 470K	1	[M]E, EB, EG
R78	ERDS2FJ680	1/4W 68	1	[M]
R101	ERDS2TJ474T	1/4W 470K	1	[M]
R102	ERDS2TJ153T	1/4W 15K	1	[M]
R103	ERDS2FJ560	1/4W 56	1	[M]
R104	ERDS2TJ681T	1/4W 680	1	[M]
R105	ERDS2TJ103T	1/4W 10K	1	[M]
R107	ERDS2TJ334T	1/4W 330K	1	[M]
R109	ERDS2TJ273T	1/4W 27K	1	[M]
R110	ERDS2TJ222T	1/4W 2. 2K	1	[M]
R111	ERDS2FJ392	1/4W 3. 9K	1	[M]
R112	ERDS2TJ470T	1/4W 47	1	[M]
R113	ERDS2FJ392	1/4W 3. 9K	1	[M]
R114	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R115	ERDS2TJ333T	1/4W 33K	1	[M]
R116	ERDS2TJ152T	1/4W 1. 5K	1	[M]
R201	ERDS2TJ474T	1/4W 470K	1	[M]
R202	ERDS2TJ153T	1/4W 15K	1	[M]
R203	ERDS2FJ560	1/4W 56	1	[M]
R204	ERDS2TJ681T	1/4W 680	1	[M]
R205	ERDS2TJ103T	1/4W 10K	1	[M]
R207	ERDS2TJ334T	1/4W 330K	1	[M]
R209	ERDS2FJ273	1/4W 27K	1	[M]
R210	ERDS2FJ222	1/4W 2. 2K	1	[M]
R211	ERDS2FJ392	1/4W 3. 9K	1	[M]
R212	ERDS2TJ470T	1/4W 47	1	[M]
R213	ERDS2FJ392	1/4W 3. 9K	1	[M]
R214	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R215	ERDS2TJ333T	1/4W 33K	1	[M]
R216	ERDS2TJ152T	1/4W 1. 5K	1	[M]
R301	ERDS2TJ474T	1/4W 470K	1	[M]
R302	ERDS2TJ104T	1/4W 100K	1	[M]
R303	ERDS2TJ103T	1/4W 10K	1	[M]
R304, 05	ERDS2TJ152T	1/4W 1. 5K	2	[M]
R307, 08	ERDS2TJ153T	1/4W 15K	2	[M]
R309	ERDS2TJ331T	1/4W 330	1	[M]
R310	ERDS2TJ103T	1/4W 10K	1	[M]
⚠ R311	ERD2FCJ4R7	1/4W 4. 7	1	[M]
R312	ERDS2FJ752	1/4W 7. 5K	1	[M]
R313	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R314	ERDS2TJ153T	1/4W 15K	1	[M]
R315	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R316	ERDS2TJ470T	1/4W 47	1	[M]
R317	ERDS2TJ103T	1/4W 10K	1	[M]
R318	ERDS2FJ682	1/4W 6. 8K	1	[M]
R319	ERDS2FJ823	1/4W 82K	1	[M]
R320, 21	ERDS2TJ103T	1/4W 10K	2	[M]
R322	ERDS2TJ102T	1/4W 1K	1	[M]
R323	ERDS2TJ393T	1/4W 39K	1	[M]
R324	ERDS2TJ822T	1/4W 8. 2K	1	[M]
R325	ERDS2TJ562T	1/4W 5. 6K	1	[M]
R326	ERDS2FJ682	1/4W 6. 8K	1	[M]
R327	ERDS2TJ102T	1/4W 1K	1	[M]
R328	ERDS2TJ101T	1/4W 100	1	[M]
R329	ERDS2TJ335T	1/4W 3. 3M	1	[M]
R330	ERDS2FJ823	1/4W 82K	1	[M]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R331	ERDS2TJ104T	1/4W 100K	1	[M]
R332	ERDS2TJ333T	1/4W 33K	1	[M]
R333	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R334	ERDS2TJ393T	1/4W 39K	1	[M]
R335	ERDS2FJ682	1/4W 6. 8K	1	[M]
R336	ERDS2TJ681T	1/4W 680	1	[M]
R337	ERDS2TJ273T	1/4W 27K	1	[M]
R338	ERDS2TJ332T	1/4W 3. 3K	1	[M]
R339	ERDS2TJ473T	1/4W 47K	1	[M]
R340	ERDS2TJ223T	1/4W 22K	1	[M]
R342	ERDS2TJ123T	1/4W 12K	1	[M]
R352	ERDS2TJ473T	1/4W 47K	1	[M]
R354	ERDS2TJ332T	1/4W 3. 3K	1	[M]
R355	ERDS2TJ222T	1/4W 2. 2K	1	[M]
R391	ERDS2TJ223T	1/4W 22K	1	[M]
R395	ERDS2TJ103T	1/4W 10K	1	[M]
R396, 97	ERDS2TJ102T	1/4W 1K	2	[M]
R399	ERDS2TJ102T	1/4W 1K	1	[M]
R401	ERDS2FJ183	1/4W 18K	1	[M]
R404	ERDS2TJ562T	1/4W 5. 6K	1	[M]
R405	ERDS2FJ183	1/4W 18K	1	[M]
R408	ERDS2TJ333T	1/4W 33K	1	[M]
R410	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R411	ERDS2TJ222T	1/4W 2. 2K	1	[M]
R414	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R415	ERDS2TJ223T	1/4W 22K	1	[M]
R416	ERDS2TJ104T	1/4W 100K	1	[M]
R417	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R418	ERDS2TJ473T	1/4W 47K	1	[M]
R423	ERDS2TJ273T	1/4W 27K	1	[M]
R424	ERDS2TJ102T	1/4W 1K	1	[M]
R425	ERDS2TJ562T	1/4W 5. 6K	1	[M]
R426	ERDS2TJ820T	1/4W 82	1	[M]
R429, 30	ERDS2FJ2R2	1/4W 2. 2	2	[M]
R433	ERDS2TJ100T	1/4W 10	1	[M]
R434	ERDS2TJ1R2T	1/4W 1. 2	1	[M]
R435	ERDS2TJ1R0T	1/4W 1	1	[M]
R438	ERDS2TJ103T	1/4W 10K	1	[M]
R439	ERDS2FJ682	1/4W 6. 8K	1	[M]
R444	ERDS2TJ103T	1/4W 10K	1	[M]
R501	ERDS2FJ183	1/4W 18K	1	[M]
R504	ERDS2TJ562T	1/4W 5. 6K	1	[M]
R505	ERDS2FJ183	1/4W 18K	1	[M]
R508	ERDS2TJ333T	1/4W 33K	1	[M]
R510	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R511	ERDS2TJ222T	1/4W 2. 2K	1	[M]
R514	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R515	ERDS2TJ223T	1/4W 22K	1	[M]
R516	ERDS2TJ104T	1/4W 100K	1	[M]
R517	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R518	ERDS2TJ473T	1/4W 47K	1	[M]
R519	ERDS2TJ153T	1/4W 15K	1	[M]
R520	ERDS2TJ223T	1/4W 22K	1	[M]
R521	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R522	ERDS2TJ222T	1/4W 2. 2K	1	[M]
R523	ERDS2TJ273T	1/4W 27K	1	[M]
R524	ERDS2TJ102T	1/4W 1K	1	[M]
R525	ERDS2TJ562T	1/4W 5. 6K	1	[M]
R526	ERDS2TJ820T	1/4W 82	1	[M]
R528	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R529, 30	ERDS2FJ2R2	1/4W 2. 2	2	[M]
R533	ERDS2TJ100T	1/4W 10	1	[M]
R534	ERDS2TJ1R2T	1/4W 1. 2	1	[M]
R535	ERDS2TJ1R0T	1/4W 1	1	[M]
R538	ERDS2TJ103T	1/4W 10K	1	[M]
R539	ERDS2FJ682	1/4W 6. 8K	1	[M]
R540	ERDS2TJ474T	1/4W 470K	1	[M]
R541	ERDS2TJ182T	1/4W 1. 8K	1	[M]
R542	ERDS2TJ222T	1/4W 2. 2K	1	[M]
R544	ERDS2TJ103T	1/4W 10K	1	[M]
R606	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R607, 08	ERDS2TJ223T	1/4W 22K	2	[M]
R611	ERDS2TJ472T	1/4W 4. 7K	1	[M]
R612	ERDS2TJ101T	1/4W 100	1	[M]
R613	ERDS2TJ681T	1/4W 680	1	[M]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R614	ERDS2TJ104T	1/4W 100K	1	[M]
R615, 16	ERDS2TJ334T	1/4W 330K	2	[M]
R617, 18	ERDS2TJ330T	1/4W 33	2	[M]
R619	ERDS2TJ221T	1/4W 220	1	[M]
R623	ERDS2TJ103T	1/4W 10K	1	[M]
R624	ERDS2TJ102T	1/4W 1K	1	[M]
R625	ERDS2TJ472T	1/4W 4.7K	1	[M]
R626	ERDS2TJ122T	1/4W 1.2K	1	[M]
R627	ERDS2TJ331T	1/4W 330	1	[M]
R628	ERDS2TJ103T	1/4W 10K	1	[M]
R629	ERDS2TJ331T	1/4W 330	1	[M]
R630	ERDS2TJ681T	1/4W 680	1	[M]
R631	ERDS2TJ103T	1/4W 10K	1	[M]
R632-34	ERDS2TJ1R2T	1/4W 1.2	3	[M]
R635, 36	ERDS2TJ222T	1/4W 2.2K	2	[M]
R637, 38	ERDS2TJ102T	1/4W 1K	2	[M]
R639	ERD2FCG470	1/4W 47	1	[M]
R641	ERDS2TJ101T	1/4W 100	1	[M]
R642	ERDS2TJ122T	1/4W 1.2K	1	[M]
R643	ERDS2TJ103T	1/4W 10K	1	[M]
R644-47	ERDS1FVJ270T	1/2W 27	4	[M]
R648	ERDS2TJ1R2T	1/4W 1.2	1	[M]
R649	ERDS2TJ151T	1/4W 150	1	[M]
R650	ERDS2TJ122T	1/4W 1.2K	1	[M]
R651	ERDS2FJ272	1/4W 2.7K	1	[M]
R653	ERDS2FJ272	1/4W 2.7K	1	[M]
R657	ERDS2TJ122T	1/4W 1.2K	1	[M]
R658	ERDS2TJ333T	1/4W 33K	1	[M]
R659	ERDS2TJ472T	1/4W 4.7K	1	[M]
R669	ERDS2TJ333T	1/4W 33K	1	[M]
R672, 73	ERDS2TJ103T	1/4W 10K	2	[M]
R675	ERDS2TJ103T	1/4W 10K	1	[M]
R678	ERDS2TJ103T	1/4W 10K	1	[M]
R679	ERDS2TJ332T	1/4W 3.3K	1	[M]
R680	ERDS2TJ104T	1/4W 100K	1	[M]
R682	ERDS2TJ472T	1/4W 4.7K	1	[M]
R684	ERDS2TJ271T	1/4W 270	1	[M]
R685	ERDS2TJ101T	1/4W 100	1	[M]
R686	ERDS2FJ3R3	1/4W 3.3	1	[M]
R687	ERDS2TJ271T	1/4W 270	1	[M]
R801	ERDS2TJ472T	1/4W 4.7K	1	[M]
R802	ERDS2TJ223T	1/4W 22K	1	[M]
R804	ERDS2TJ332T	1/4W 3.3K	1	[M]
R805	ERDS2TJ102T	1/4W 1K	1	[M]
R806, 07	ERDS2TJ101T	1/4W 100	2	[M]
R808, 09	ERDS2TJ102T	1/4W 1K	2	[M]
R810	ERDS2TJ331T	1/4W 330	1	[M]
R811-13	ERDS2FJ823	1/4W 82K	3	[M]
R814	ERDS2TJ222T	1/4W 2.2K	1	[M]
R815	ERDS2TJ104T	1/4W 100K	1	[M]
R816	ERDS2TJ561T	1/4W 560	1	[M]
R817	ERDS2TJ104T	1/4W 100K	1	[M]
R818	ERDS2TJ153T	1/4W 15K	1	[M]
R819-24	ERDS2TJ472T	1/4W 4.7K	6	[M]
R825	ERDS2TJ102T	1/4W 1K	1	[M]
R826	ERDS2TJ103T	1/4W 10K	1	[M]
R827-29	ERDS2TJ472T	1/4W 4.7K	3	[M]
R830, 31	ERDS2TJ102T	1/4W 1K	2	[M]
R832	ERDS2TJ222T	1/4W 2.2K	1	[M]
R833	ERDS2TJ106T	1/4W 10M	1	[M]
R834	ERDS2TJ681T	1/4W 680	1	[M]
R835	ERDS2TJ334T	1/4W 330K	1	[M]
R836, 37	ERDS2TJ472T	1/4W 4.7K	2	[M]
R838, 39	ERDS2TJ473T	1/4W 47K	2	[M]
R840, 41	ERDS1FJ103	1/2W 10K	2	[M]
R842, 43	ERDS2TJ102T	1/4W 1K	2	[M]
R844	ERDS2TJ122T	1/4W 1.2K	1	[M]
R845	ERDS2TJ182T	1/4W 1.8K	1	[M]
R846	ERDS2TJ222T	1/4W 2.2K	1	[M]
R847	ERDS2FJ272	1/4W 2.7K	1	[M]
R848	ERDS2TJ472T	1/4W 4.7K	1	[M]
R849	ERDS2FJ682	1/4W 6.8K	1	[M]
R850	ERDS2TJ103T	1/4W 10K	1	[M]
R851, 52	ERDS2TJ102T	1/4W 1K	2	[M]
R853	ERDS2TJ122T	1/4W 1 2K	1	[M]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R854	ERDS2TJ182T	1/4W 1.8K	1	[M]
R855	ERDS2TJ222T	1/4W 2.2K	1	[M]
R856	ERDS2FJ272	1/4W 2.7K	1	[M]
R857	ERDS2TJ472T	1/4W 4.7K	1	[M]
R858	ERDS2FJ682	1/4W 6.8K	1	[M]
R859	ERDS2TJ103T	1/4W 10K	1	[M]
R860	ERDS2TJ223T	1/4W 22K	1	[M]
R861	ERDS2TJ683T	1/4W 68K	1	[M]
R862	ERDS2TJ473T	1/4W 47K	1	[M]
R864	ERDS2TJ102T	1/4W 1K	1	[M]
R866	ERDS2TJ153T	1/4W 15K	1	[M]
R867	ERDS2TJ152T	1/4W 1.5K	1	[M]
R868	ERDS2FJ105	1/4W 1M	1	[M]
R869, 70	ERDS2TJ222T	1/4W 2.2K	2	[M]
R871	ERDS2TJ103T	1/4W 10K	1	[M]
R873	ERDS2TJ103T	1/4W 10K	1	[M]
R875, 76	ERDS2TJ103T	1/4W 10K	2	[M]
R877, 78	ERDS2TJ223T	1/4W 22K	2	[M]
R879	ERDS2TJ332T	1/4W 3.3K	1	[M]
R880, 81	ERDS2TJ102T	1/4W 1K	2	[M]
R882, 83	ERDS2TJ103T	1/4W 10K	2	[M]
R884-86	ERDS2FJ220	1/4W 22	3	[M]
R887-89	ERDS2TJ222T	1/4W 2.2K	3	[M]
R891	ERDS2TJ121T	1/4W 120	1	[M]
R972	ERDS2FJ821	1/4W 820	1	[M]
R973	ERDS2FJ393	1/4W 39K	1	[M]
RM801	RRD0030	MOTOR	1	[M]
S790, 91	RSH1A005	SW	2	[M]
S801-22	EVQPTD05Q	SW	22	[M]
S971	RSH1A018-1U	SW	1	[M]
S972-75	RSH1A019-1U	SW	4	[M]
T901	RTP1M3B011-X	POWER TRANSFORMER	1	[M]
VR801	RRV16B24104G	V. R	1	[M]
VR802, 03	RRV09A05B54A	V. R	2	[M]
X1	RSXZ456KM01	OSCILLATOR	1	[M]
X2	RLFDFT11DD	OSCILLATOR	1	[M]
X3	SVQ49U722T-S	QSCILLATOR	1	[M]
X801	EF0EN4194T4	OSCILLATOR	1	[M]
X802	RSXD32K7S02	OSCILLATOR	1	[M]
Z1	RLA2Z002M-T	ANT COIL	1	[M]
Z2	RLI2Z006M-T	IF BLOCK	1	[M]
Z3	ENV17290G1Y	TUNER PACK	1	[M]E, EB, EG
Z3	RAL0029	TUNE PACK	1	[M]GN
Z801, 02	XAMR138	LAMP	2	[M]
Z803	RCD12042TH	SENSOR	1	[M]
Z971	EXBF7L355SYV	COMPONENT COMBNATION	1	[M]

■ Packaging


A8
P3, A4, A5, A6
A2
A1
A7
Batteries
P2
A3
P5
P4
P6
P5
P1

■ Replacement Parts List (for CD Servo Circuit)

All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks
		CD SERVO CIRCUIT	
		INTEGRATED CIRCUIT(S)	
IC701	AN8835SBE1	IC	
IC702	MN662741RPA	IC	
IC703	AN8389SE1	IC	
		TRANSISTOR(S)	
Q701	2SB709S	TRANSISTOR	
		COIL(S)	
L701-705	RLBN102V-Y	COIL	
		OSCILLATOR(S)	
X701	RSXB16M9J02T	OSCILLATOR	
		SWITCH(ES)	
S701	RSM0006-P	SW	
		CONNECTOR(S)	
CN701	RJU035T016-1	CONNECTOR(16P)	
CN702	RJS2A4230	CONNECTOR(30P)	

Ref. No.	Part No.	Values & Remarks
		RESISTORS
R701	ERJ6GEYJ4R7V	1/10W 4.7
R703	ERJ6GEYJ823	1/10W 82K
R704	ERJ6GEYJ102A	1/10W 1K
R705	ERJ6GEYJ103V	1/10W 10K
R706	ERJ6GEYJ102A	1/10W 1K
R707	ERJ6GEYJ474V	1/10W 470K
R708	ERJ6GEYJ154V	1/10W 150K
R709	ERJ6GEYJ683V	1/10W 68K
R711	ERJ6GEYJ154V	1/10W 150K
R712	ERJ6GEYJ221V	1/10W 220
R714	ERJ6GEYJ121V	1/10W 120
R717, 718	ERJ6GEYJ102A	1/10W 1K
R719	ERJ8GEY0R00A	1/8W 0.00
R720	ERJ6GEY0R00A	1/10W 0.00
R721	ERJ6GEYJ101V	1/10W 100
R722	ERJ6GEYJ563V	1/10W 56K
R723	ERJ6GEYJ182V	1/10W 1.8K
R724	ERJ6GEYJ333V	1/10W 33K
R725	ERJ6GEYJ472V	1/10W 4.7K
R726	ERJ6GEYJ473V	1/10W 47K
R727	ERJ6GEYJ822V	1/10W 8.2K
R728	ERJ6GEYJ103V	1/10W 10K
R731	ERJ6GEYJ822V	1/10W 8.2K
R735, 736	ERJ6GEYJ101V	1/10W 100
R744	ERJ6GEYJ103V	1/10W 10K
R745	ERJ6GEYJ155V	1/10W 1.5M
R748	ERJ6GEYJ182V	1/10W 1.8K
R749	ERJ6GEYJ682V	1/10W 6.8K
R750, 751	ERJ6GEYJ473V	1/10W 47K
R752	ERJ8GEYJ220V	1/8W 22
R770, 771	ERJ6GEYJ155V	1/10W 1.5M
R772	ERJ6GEYJ273V	1/10W 27K
		CHIP JAMPER(S)
RJ701-710	ERJ8GEY0R00A	1/8W 0.00
RJ711	ERJ6GEY0R00A	1/10W 0.00
RJ713	ERJ6GEY0R00A	1/10W 0.00
RJ714-717	ERJ8GEY0R00A	1/8W 0.00
RJ721-731	ERJ6GEY0R00A	1/10W 0.00
		TEST JUMPER(S)
TJ701, 702	EYF8CU	
		CAPACITORS
C701	ECEA0JKA330I	6.3V 33U
C702	ECUZNE104MBN	25V 0.1U
C703	ECEA0JKA101I	6.3V 100U
C704, 705	ECUZNE104MBN	25V 0.1U
C706	ECUV1H272KBN	50V 2700P
C707	ECUV1E273KBN	25V 0.027U
C708	ECUE1H472KBN	50V 4700P
C709	ECUE1C473KBN	16V 0.047U
C710	ECUV1H182KBN	50V 1800P
C711, 712	ECUWNE104ZFN	25V 0.1U
C713	ECUV1C104MBM	16V 0.1U
C714	ECEA0JKA101I	6.3V 100U
C716	ECUE1H561KBN	50V 560P
C717	ECUWNE104ZFN	25V 0.1U
C718	ECUVNC224KBN	16V 0.22U
C721	ECUV1H100DCN	50V 10P
C722	ECUV1H150JCN	50V 15P
C723	ECEA1AKA221I	10V 220U
C724	ECUV1C104MBM	16V 0.1U
C725, 726	ECUE1H102KBN	50V 1000P
C730	ECUWNE104ZFN	25V 0.1U
C731, 732	ECEA0JKA221I	6.3V 220U
C733	ECUZNE104MBN	25V 0.1U
C734	ECEA1AKA221I	10V 220U
C735-737	ECUWNE104ZFN	25V 0.1U
C738	ECUV1C154KBN	16V 0.15U
C742	ECUV1E273KBN	25V 0.027U
C743	ECUWNE104ZFN	25V 0.1U
C744	ECUE1E822KBN	25V 8200P
C745	ECUE1H102KBN	50V 1000P
C747	ECUE1H222KBN	50V 2200P
C748	ECUV1H471KBM	50V 470P
C749	ECUZNE104MBN	25V 0.1U
C750	ECUV1C104MBM	16V 0.1U
C751	ECUZNE104MBN	25V 0.1U
C752	ECUE1H152KBN	50V 1500P
C753	ECUV1H471KBM	50V 470P

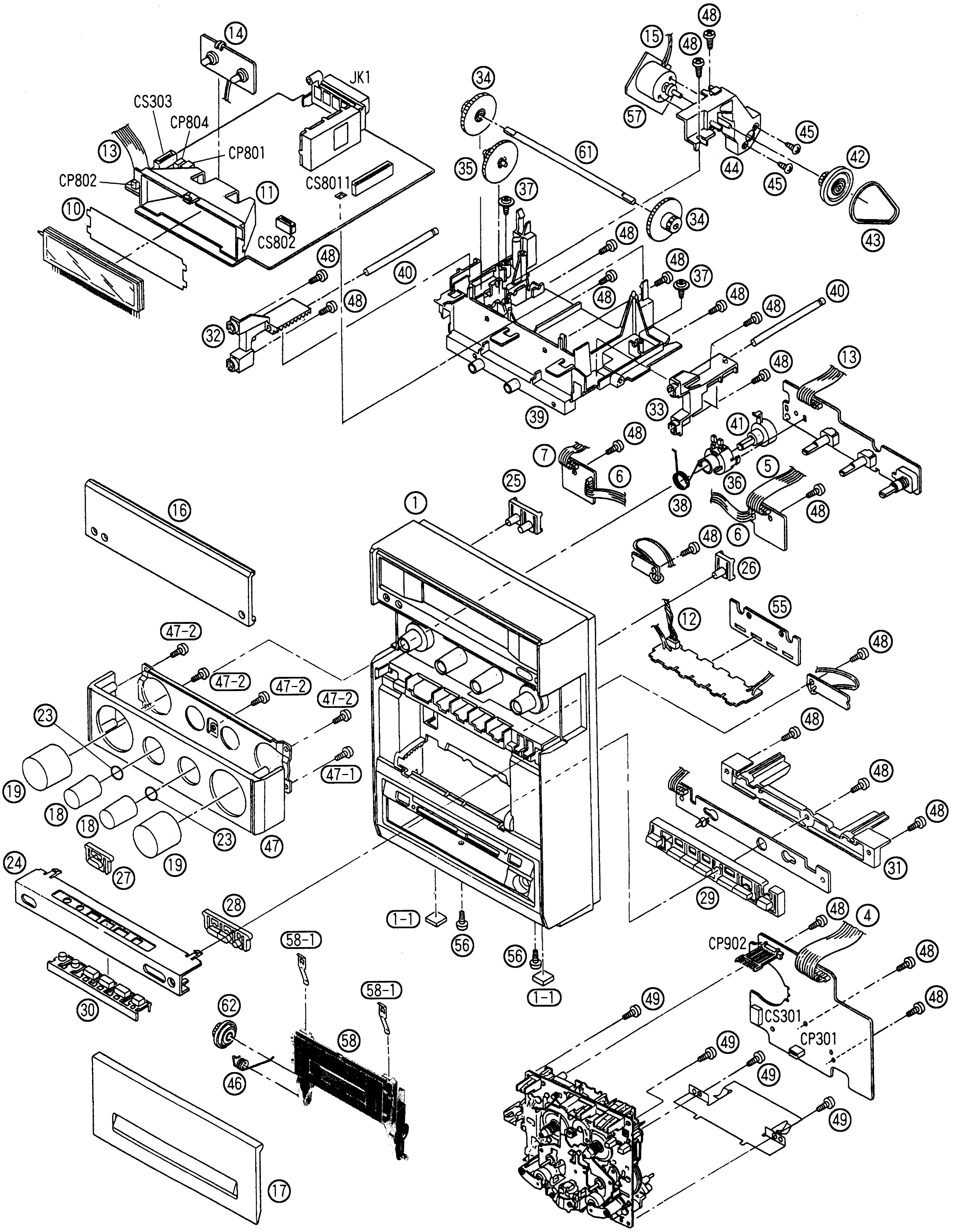
■ Replacement Parts List (for Mechanism and Loading Unit)

All parts are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks
		MECHANISM PARTS	
202	RED0043	HEAD BLOCK(R/P)	
202-1	RHD17015	SCREW	
203	RDG0300	REEL TABLE ASS'Y	
204	RDG0301	GEAR	
205	RDK0026	GEAR	
207	RDV0033-1	BELT1	
208	RDV0034	BELT2	
210	RMB0399	SPRING	
211	RMB0400	SPRING	
212	RMB0403	SPRING	
213	RMB0404	SPRING	
214	RMB0406	SPRING	
215	RMB0408	SPRING	
216	RML0370	LEVER	
217	RML0371	LEVER	
218	RML0372	LEVER	
219	RML0374	LEVER	
220	RMM0131	ROD	
221	RMM0133	ROD	
222	RMQ0519	REEL CAP	
223	RMS0398-1	SHAFT	
224	RSJ0003	PLUNGER ASS'Y	
225	RUS609ZC	SPRING	
226	RXF0049	FLYWHEEL ASS'Y	
227	RXF0050	FLYWHEEL ASS'Y	
228	RXG0040	GEAR	
229	RMK0283	SUB CHASSIS	
230	RXL0124	PINCH ROLLER ASS'Y	
230-1	RMB0401	SPRING	
231	RXL0125	PINCH ROLLER ASS'Y	
231-1	RMB0402	SPRING	
232	RXL0126	ARM	
233	RXQ0412	CHASSIS ASS'Y	
233-1	RMB0405	SPIRNG	
233-2	RMM0132	ROD	
234	REM0055	MOTOR ASS'Y	
235	RHD26022	SCREW	
236	XTW2+5L	SCREW	
237	XTW26+10S	SCREW	
238	XYC2+JF17	SCREW	
240	RFKJSTR280PP	MAIN CHASSIS ASS'Y	

Ref. No.	Part No.	Part Name & Description	Remarks
		LOADING UNIT	
301	RFKJXDT07-K	ROADING CHASSIS ASS'Y	
301-1	RDG0142	GEAR	
301-2	RDG0193	GEAR	
301-3	RDP0065	PULLY	
302	REM0019	MOTOR	
303	RMK0255	BELT COVER	
304	RGQ0144-K	DISC TRAY	
305 ⚠	RAE0150Z	TRAVERSE DECK	
305-1	SHGD113-1	RUBBER(A)	
305-2	SNSD38	SCREW	
306	RMS0350	PIN(B)	
307	RMS0123-1	PIN(A)	
308	RME0109	SPRING(A)	
309	RME0142	SPRING(B)	
310	RMR0698-K	TRAVERSE CHASSIS	
311	XTV2+6G	SCREW	
312	RME0063	SPRING	
313	RMM0079-1	SLIDE PLATE(A)	
314	RML0178-1	LEVER	
315	RFKNLPG440-K	GEAR ASS'Y(B)	
316	RHD20009-1	SCREW	
317	RME0087	SPRING	
318	RML0349	LEVER	
319	RMM0059-1	SLIDE PLATE(B)	
320	RMR0334	HOLDER	
321	RHM245ZA	MAGNET	
322	RXQ0380	MAGNET HOLDER	
323	XTN26+6G	SCREW	
324	RMA0793	CLAMPER	
325	XYN2+F6FZ	SCREW	
326	RMG0158	BELT	
327	XTN26+6G	SCREW	

■ Cabinet Parts Location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15
48
14
JK1
34
CS303
CP804
57
13
CP801
61
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42
CP802
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CS8011
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37
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CS802
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16
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26
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12
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47-2
47-2
47-2
47-2
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47-1
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31
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29
1-1
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CP301
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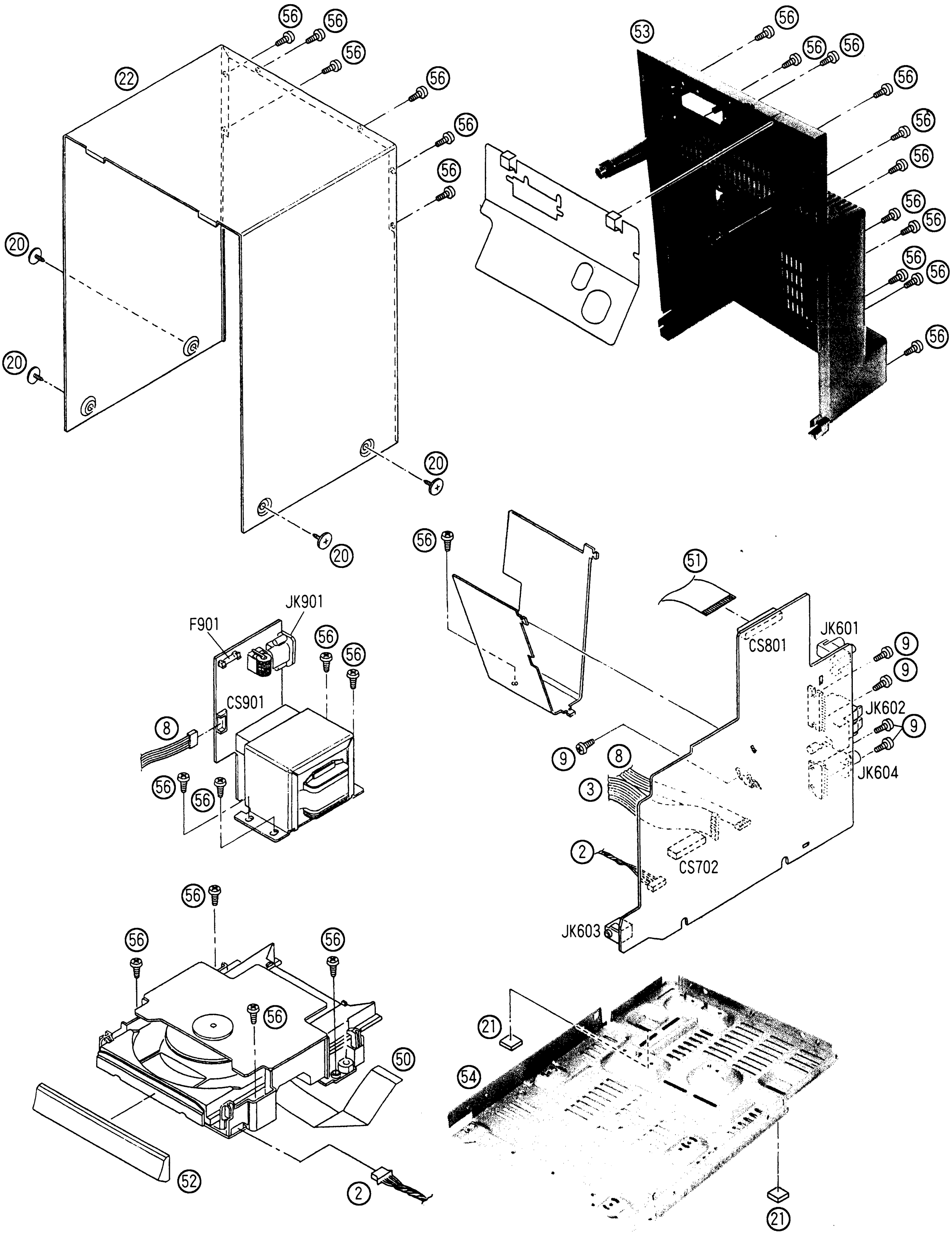
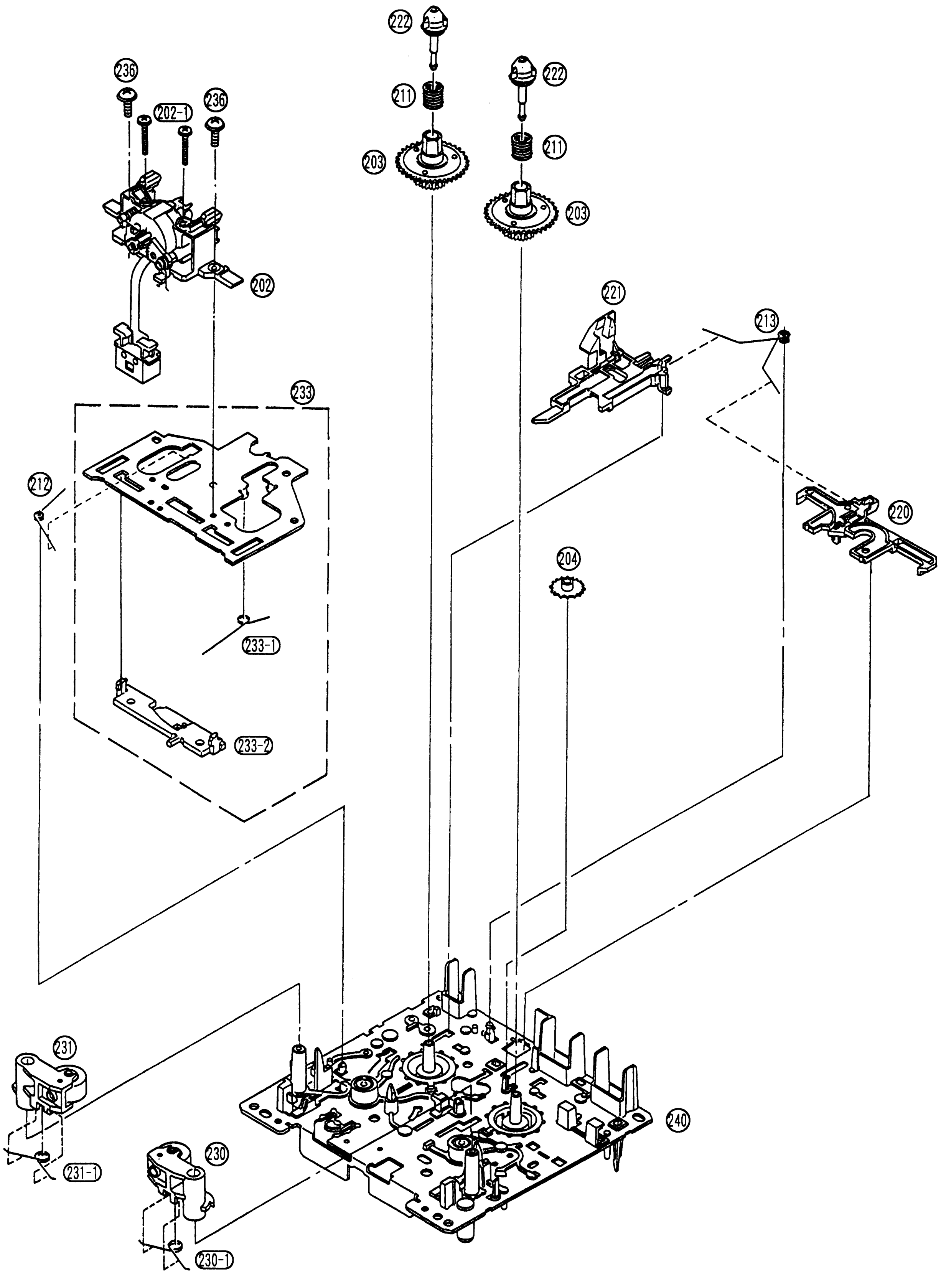


JK901
F901
CS901
CS801
JK601
JK602
JK604
CS702
JK603

■ Mechanism Parts Location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202-1
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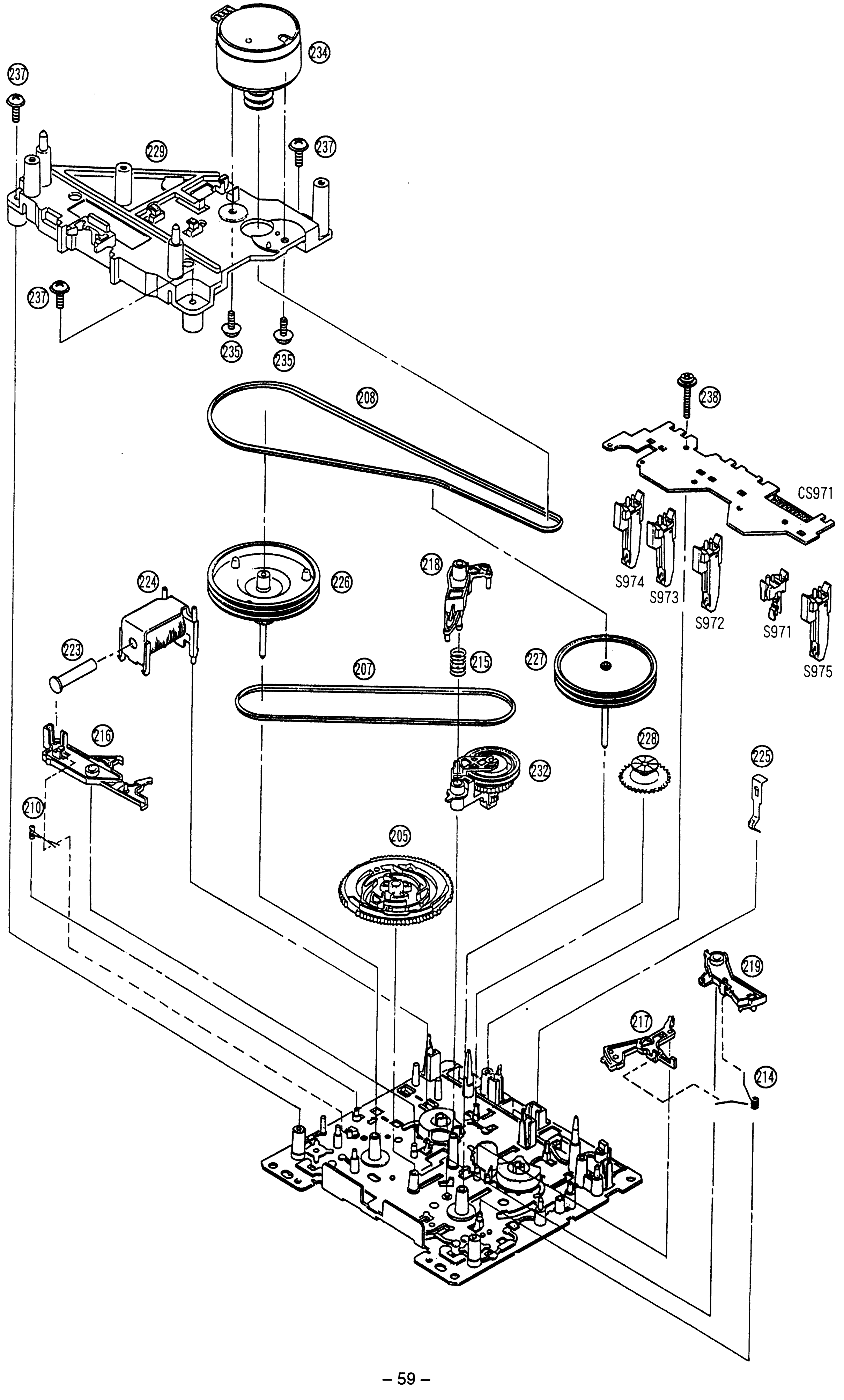
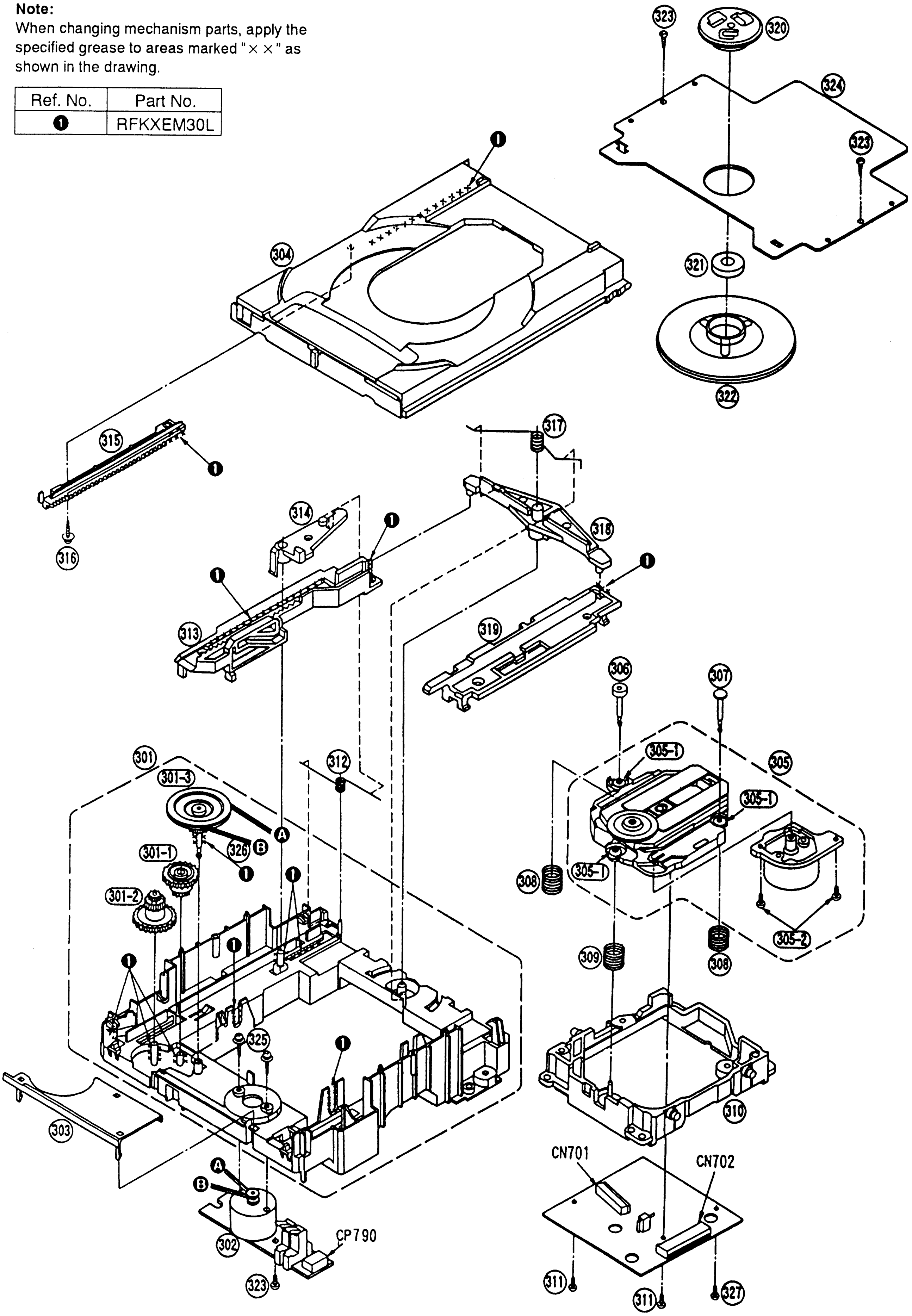
212
220
204
233-1
233-2
231
240
230
231-1
230-1


CS971
S974
S973
S972
S971
S975

■ Loading Unit Parts Location

Note:
When changing mechanism parts, apply the specified grease to areas marked "× ×" as shown in the drawing.

Ref. No.	Part No.
❶	RFKXEM30L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❶
(313)
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(307)
(305-1)
(305)
(305-1)
(301)
(301-3)
(312)
Ⓐ
(326) Ⓑ
(301-1)
❶
❶
(301-2)
(308)
(305-1)
❶
❶
(309)
(308)
(305-2)
(325)
❶
(310)
(303)
CN701
CN702
Ⓐ
Ⓑ
CP790
(302)
(323)
(311)
(311)
(327)

PANA-8764

ORDER NO. MD980201130
A6

Service Manual

Supplement 1

MASH*

CD Stereo System
SA-PM15

Colour

(S) ... Silver Type

Area

Suffix for Model No.	Area	Colour
(PP)	U.S.A. and Canada	(S)
(E)	Europe	
(EB)	Great Britain	
(EG)	Germany	
(GN)	Oceania	
(GH)	Hong Kong	
(GT)	Taiwan	

*MASH is a trademark of NTT.

Please file and use this Service Manual together with the Service Manual for Model No. SA-PM15 Order No. MD9708062C1 (PP)
MD9707062C8-1 (EP)
MD9708094C3 (GT,GH)

Note : This Supplement Service Manual is intended to provide additional information or correction to the existing service manual for model No. SA-PM15. Be sure to update your Service Manual for future reference.

TAPE SECTION : AR2 MECHANISM SERIES
CD SECTION : RAE0152Z-M TRAVERSE DECK SERIES

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic®

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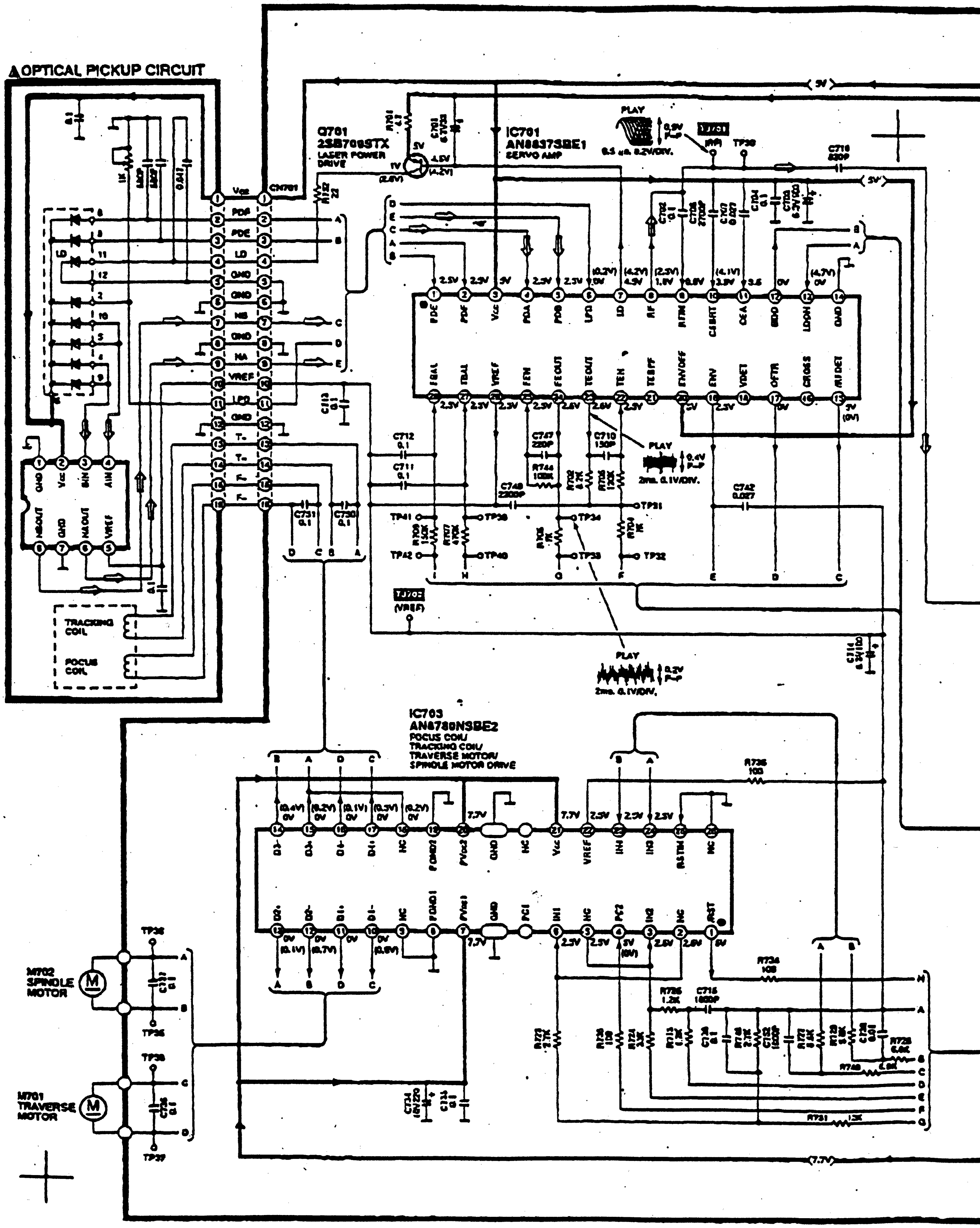
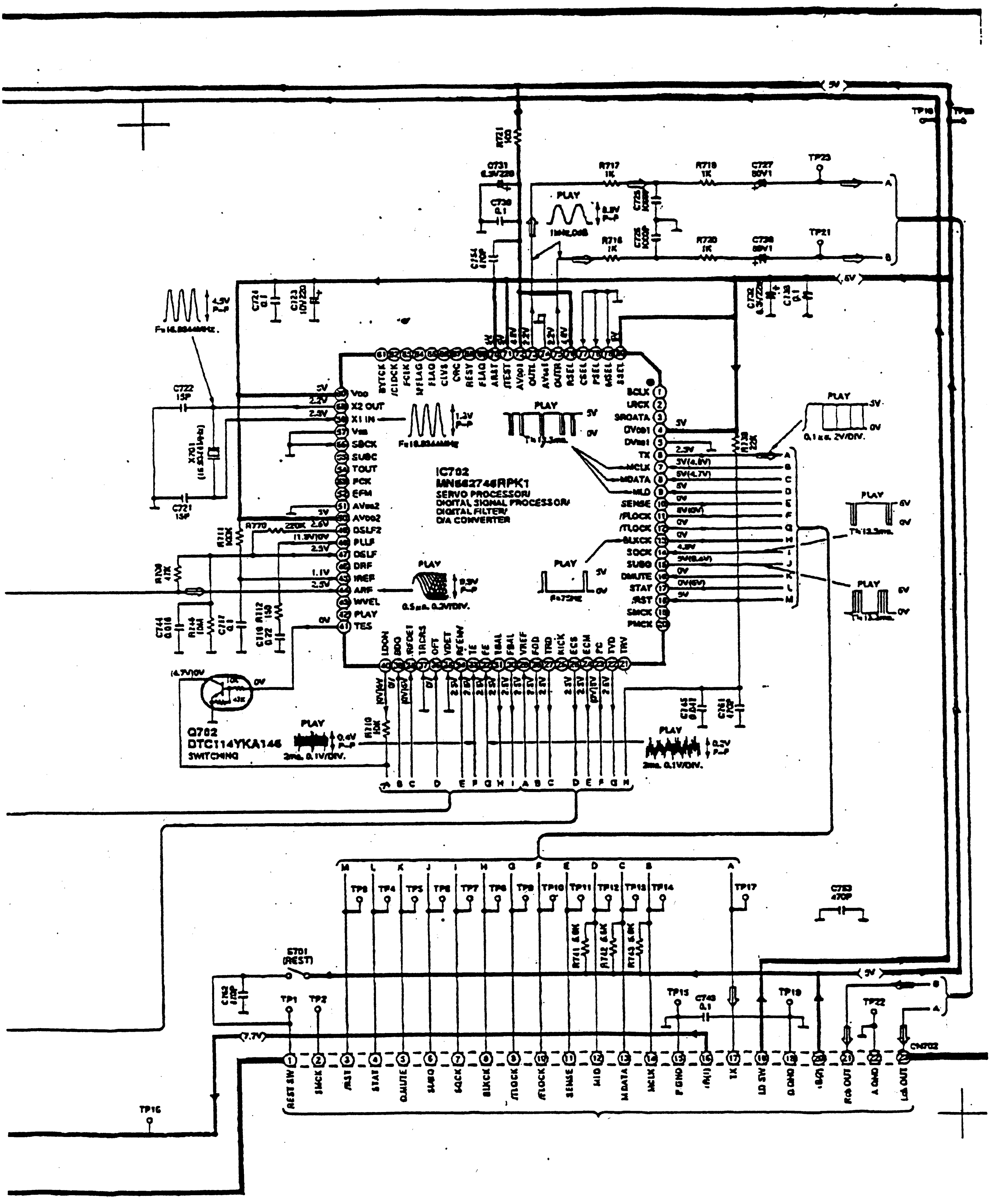
Schematic Diagram

A CD SERVO CIRCUIT

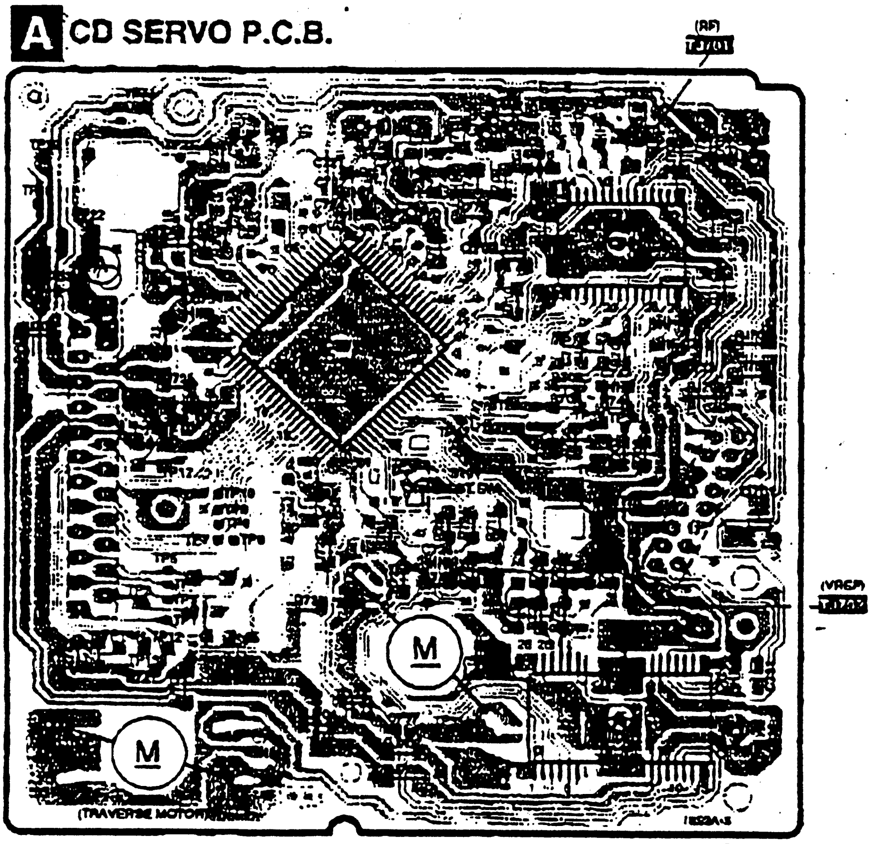

OPTICAL PICKUP CIRCUIT
Q701
2SB709STX
LASER POWER DRIVE
IC701
AN8837SBE1
SERVO AMP
CN701
Vcc
PDF
PDE
LD
GND
NS
NA
VREF
LPD
T-
T+
F-
F+
TJ701
(RF)
TP38
PLAY
0.9V P-P
0.5 uS. 0.2V/DIV.
2mS. 0.1V/DIV.
0.4V P-P
0.2V P-P
5V
7.7V
TJ702
(VREF)
TP31
TP32
TP33
TP34
TP39
TP40
TP41
TP42
TRACKING COIL
FOCUS COIL
IC703
AN8780NSBE2
FOCUS COIL/
TRACKING COIL/
TRAVERSE MOTOR/
SPINDLE MOTOR DRIVE
M702
SPINDLE MOTOR
M701
TRAVERSE MOTOR
TP36
TP37
TP38
TP39


IC702
MN662746RPK1
SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER/
D/A CONVERTER
Q702
DTC114YKA146
SWITCHING
X701 (16.9344MHz)
C722 15P
C721 15P
F=16.9344MHz
4.5V P-P
1.3V P-P
R721 100
C731 6.3V/220
C730 0.1
C734 470P
R717 1K
R719 1K
C727 50V1
TP23
R718 1K
R720 1K
C728 50V1
TP21
C729 1000P
C725 1000P
PLAY
1kHz,0dB
5.8V P-P
C724 0.1
C723 10V/220
C732 6.3V/220
C733 0.1
R738 22K
5V
6V
TP18
TP20
Vpp
X2 OUT
X1 IN
Vss
SBCK
SUBC
TOUT
PCK
EFM
AVss2
AVDD2
DSLF2
PLLF
DSLF
DRF
IREF
ARF
WVEL
PLAY
TES
BYTCK
/CLDCK
FCLK
IPFLAG
FLAG
CLVS
CRC
RESY
ARST
/TEST
AVDD1
OUTL
AVss1
OUTR
RSEL
CSEL
PSEL
MSEL
SSEL
BCLK
LRCK
SRDATA
DVDD1
DVss1
TX
MCLK
MDATA
MLD
SENSE
/FLOCK
/TLOCK
BLKCK
SQCK
SUBQ
DMUTE
STAT
/RST
SMCK
PMCK
LDON
LD
BDO
/RFDET
TRCRS
OFT
VDET
RFENV
TE
FE
FBAL
TBAL
VREF
FOD
TRD
KICK
ECS
ECM
FC
TVD
TRV
R770 220K
R711 100K
R736 47K
C744 0.018
R744 10M
C737 0.1
R712 150
C710 0.22
R710 10K
C745 0.047
C761 470P
0.1μs, 2V/DIV.
0.5μs, 0.2V/DIV.
0.3V P-P
T≒13.3ms
F≒7.35kHz
F=72Hz
2ms, 0.1V/DIV.
0.4V P-P
0.2V P-P
(4.7V)0V
10K
47K
A B C D E F G H I J K L M
TP3 TP4 TP5 TP6 TP7 TP8 TP9 TP10 TP11 TP12 TP13 TP14 TP17
R741 6.8K
R742 6.8K
R743 6.8K
S701 (REST)
C762 0.1
C763 470P
TP1 TP2
TP15
C740 0.1
TP19
TP22
TP16
(7.7V)
CN702
REST SW
SMCK
/RST
STAT
DMUTE
SUBQ
SQCK
BLKCK
/TLOCK
/FLOCK
SENSE
MLD
MDATA
MCLK
P.GND
+B(1)
TX
LD SW
D.GND
+B(2)
Rch OUT
A.GND
Lch OUT

■ Printed Circuit Board (NEW)

■ SERVO P.C.B. (REPX0144)

A CD SERVO P.C.B.


(RF)
TJ701
(VREF)
TJ702
M
M
(TRAVERSE MOTOR)
(REP2587A-M)

CD Replacement Parts List

Notes: New and Original are not compatible. Use proper parts as required.
[M] Indicates in the Remarks columns indicates parts supplied by MESA.

Ref No.	Part No.	Part Name & Description	Remarks
		INTEGRATED CIRCUITS	
IC701	AN8837SBE1	IC, SERVO AMP.	[M]
IC702	MN662746RPK1	IC, DIGITAL LSI	[M]
IC703	AN8780SBE2	IC, 4 CH DRIVE	[M]
		TRANSISTORS	
Q701	2SA1037AKSTX	TRANSISTOR	[M]
Q702	DTC114YKA146	TRANSISTOR	[M]
		SWITCH	
S701	RSH1A043-U	SW. RESET	[M]
		CONNECTORS	
CN701	RJS2A8016	16 PIN FFC CONNECTOR	[M]
CN702	RJS1A6723-1Q	23 PIN FFC CONNECTOR	[M]
		OSCILLATOR	
X701	RSXZ16M9M01T	CERAMIC OSC	[M]
		CHIP JUMPERS	
RJ701	ERJ6GEY0R00A	0 1/10W	[M]
RJ702	ERJ8GEY0R00A	0 1/8W	[M]
RJ703	ERJ8GEY0R00A	0 1/8W	[M]
RJ704	ERJ8GEY0R00A	0 1/8W	[M]
RJ705	ERJ8GEY0R00A	0 1/8W	[M]
RJ706	ERJ8GEY0R00A	0 1/8W	[M]
RJ707	ERJ8GEY0R00A	0 1/8W	[M]
RJ708	ERJ8GEY0R00A	0 1/8W	[M]
RJ709	ERJ8GEY0R00A	0 1/8W	[M]
RJ710	ERJ8GEY0R00A	0 1/8W	[M]
RJ721	ERJ6GEY0R00A	0 1/10W	[M]
RJ722	ERJ6GEY0R00A	0 1/10W	[M]
RJ723	ERJ6GEY0R00A	0 1/10W	[M]
RJ724	ERJ8GEY0R00A	0 1/10W	[M]
RJ725	ERJ8GEY0R00A	0 1/10W	[M]
RJ726	ERJ6GEY0R00A	0 1/10W	[M]
RJ727	ERJ6GEY0R00A	0 1/10W	[M]
RJ728	ERJ6GEY0R00A	0 1/10W	[M]
RJ750	ERJ6GEY0R00A	0 1/10W	[M]
		TEST JUMPER	
TJ701	EYF8CU	TEST JUMPER	[M]
		MECHANISMS	
305	RAE0152Z-M	TRAVERSE UNIT	[M] → RAE0152Z-M
305-1	SHGD113-1	FLOATING RUBBER	[M]
305-2	SNSD38	SCREW	[M]
306	RMS0350	FIXED PIN B	[M]
307	RMS0123-1	FIXED PIN A	[M]
308	RME0109	FLOATING SPRING A	[M]
309	RME0142	FLOATING SPRING B	[M]
310	RMR0698-K	TRAVERSE CHASSIS	[M]
327	XTN2+6G	SCREW	[M]

■ Resistors & Capacitors (Servo P.C.B.)

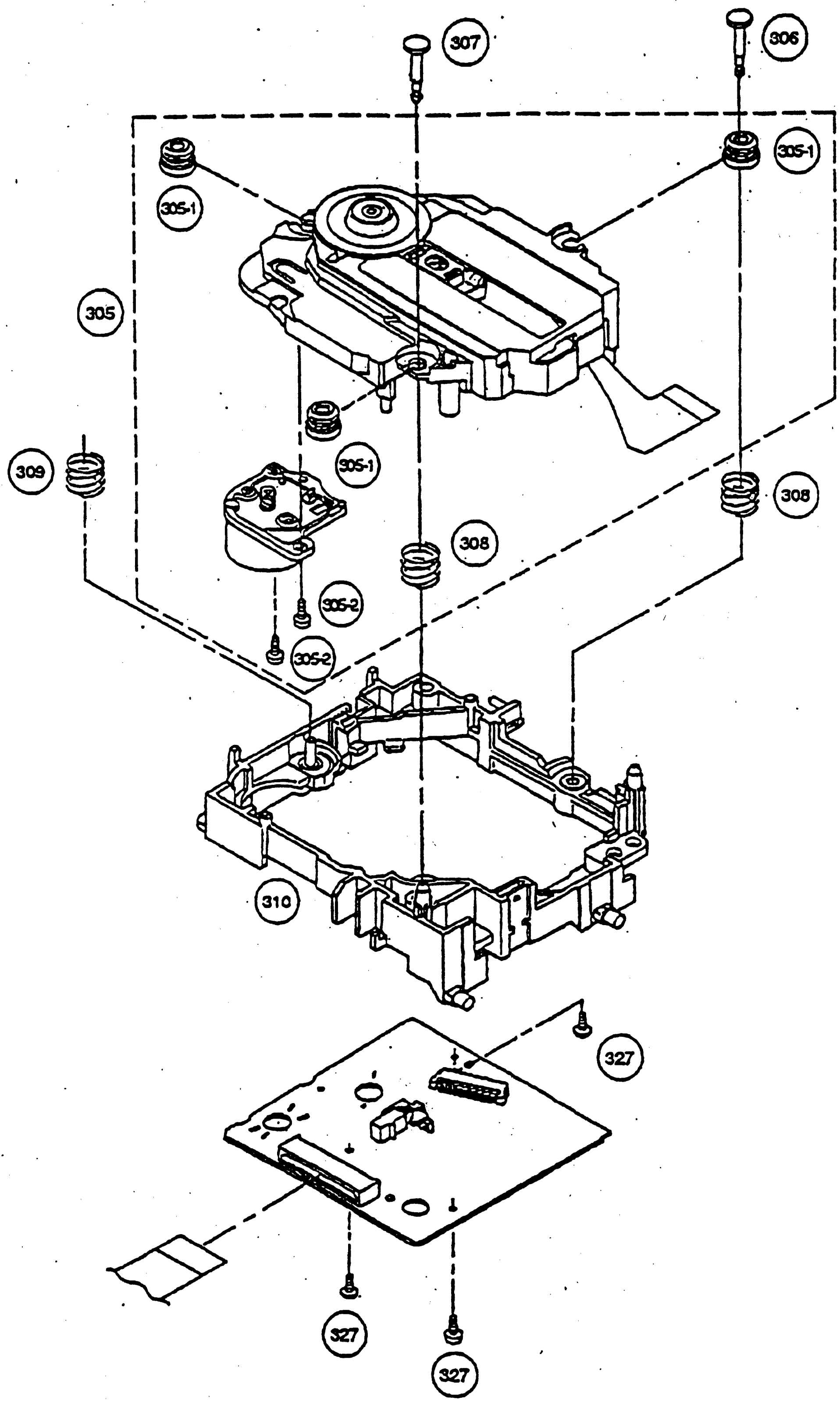
Notes : • Capacitor values are in microfarad (μF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)
• Resistors values are in ohms, unless specified otherwise, 1k=1,000(OHM), 1M=1,000k(OHM)

Ref No.	Part No.	Values & Remarks
		<SERVO P.C.B.>
		RESISTORS
R701	ERJ6GEYJ4R7A	4.7 1/10W [M]
R702	ERJ6GEYJ822A	8.2K 1/10W [M]
R704	ERJ6GEYJ102A	1K 1/10W [M]
R705	ERJ6GEYJ124A	120K 1/10W [M]
R706	ERJ6GEYJ102A	1K 1/10W [M]
R707	ERJ6GEYJ474A	470K 1/10W [M]
R708	ERJ6GEYJ154A	150K 1/10W [M]
R709	ERJ6GEYJ473A	47K 1/10W [M]
R710	ERJ6GEYJ103A	10K 1/10W [M]
R711	ERJ6GEYJ154A	150K 1/10W [M]
R712	ERJ6GEYJ221A	220 1/10W [M]
R715	ERJ6GEYJ122A	1.2K 1/10W [M]
R717	ERJ6GEYJ102A	1K 1/10W [M]
R716	ERJ6GEYJ102A	1K 1/10W [M]
R719	ERJ6GEYJ102A	1K 1/10W [M]
R720	ERJ6GEYJ102A	1K 1/10W [M]
R721	ERJ6GEYJ101A	100 1/10W [M]
R723	ERJ6GEYJ122A	1.2K 1/10W [M]
R724	ERJ6GEYJ333A	33K 1/10W [M]
R725	ERJ6GEYJ122A	1.2K 1/10W [M]
R727	ERJ6GEYJ682A	6.8K 1/10W [M]
R728	ERJ6GEYJ682A	6.8K 1/10W [M]
R729	ERJ6GEYJ562A	5.6K 1/10W [M]
R731	ERJ6GEYJ472A	4.7K 1/10W [M]
R734	ERJ6GEYJ101A	100 1/10W [M]
R735	ERJ6GEYJ101A	100 1/10W [M]
R736	ERJ6GEYJ101A	100 1/10W [M]
R738	ERJ6GEYJ223A	22K 1/10W [M]
R741	ERJ6GEYJ562A	5.6K 1/10W [M]
R742	ERJ6GEYJ562A	5.6K 1/10W [M]
R743	ERJ6GEYJ562A	5.6K 1/10W [M]
R744	ERJ6GEYJ104A	100K 1/10W [M]
R745	ERJ6GEYJ155A	1.5M 1/10W [M]
R749	ERJ6GEYJ682A	6.8K 1/10W [M]
R752	ERJ6GEYJ220A	22 1/8W [M]
R770	ERJ6GEYJ224A	220K 1/10W [M]

Ref No.	Part No.	Values & Remarks
		CAPACITORS
C701	ECEA0JKA330I	33 6.3V [M]
C702	ECUZ1E104MBN	0.1 25V [M]
C703	ECEA0JKA101I	100 6.3V [M]
C704	ECUZ1E104MBN	0.1 25V [M]
C706	ECUZ1H272KBN	2700P 50V [M]
C707	ECUZ1E273KBN	0.027 25V [M]
C710	ECUV1H121KCN	120P 50V [M]
C711	ECUZ1E104ZFN	0.1 25V [M]
C712	ECUZ1E104ZFN	0.1 25V [M]
C713	ECUZ1E104MBM	0.1 25V [M]
C714	ECEA0JKA101I	100 6.3V [M]
C715	ECUZ1H182KBN	1800P 50V [M]
C716	ECUZ1H821KBN	820P 50V [M]
C717	ECUZ1E104ZFN	0.1 25V [M]
C718	ECUZ1C224KBN	0.22 16V [M]
C721	ECUZ1H150JCN	15P 50V [M]
C722	ECUZ1H150JCN	15P 50V [M]
C723	ECEA1AKA221I	220 10V [M]
C724	ECUZ1E104MBN	0.1 25V [M]
C725	ECUZ1H102KBN	1000P 50V [M]
C726	ECUZ1H102KBN	1000P 50V [M]
C727	ECA1HAK010XI	1 50V [M]
C728	ECA1HAK010XI	1 50V [M]
C730	ECUZ1E104ZFN	0.1 25V [M]
C731	ECEA0JKA221I	220 6.3V [M]
C732	ECEA0JKA221I	220 6.3V [M]
C733	ECUZ1E104MBN	0.1 25V [M]
C734	ECEA1AKA221I	220 10V [M]
C735	ECUZ1E104ZFN	0.1 25V [M]
C736	ECUZ1E104ZFN	0.1 25V [M]
C737	ECUZ1E104ZFN	0.1 25V [M]
C738	ECUZ1E104MBN	0.1 25V [M]
C739	ECUZ1H103KBN	0.01 50V [M]
C742	ECUZ1E273KBN	0.027 25V [M]
C743	ECUZ1E104ZFN	0.1 25V [M]
C744	ECUZ1E123KBN	0.012 25V [M]
C745	ECUZ1C473MBN	0.047 16V [M]
C747	ECUV1H221KBN	220P 50V [M]
C748	ECUZ1H471KBN	470P 50V [M]
C749	ECUZ1H182KBN	1800P 50V [M]
C750	ECUZ1E104MBN	0.1 25V [M]

Ref No.	Part No.	Values & Remarks
C751	ECUZ1E104MBN	0.1 25V [M]
C752	ECUV1H332KBN	3300P 50V [M]
C753	ECUZ1H471KBM	470P 50V [M]
C754	ECUZ1H471KBN	470P 50V [M]
C761	ECUZ1H471KBN	470P 50V [M]
C762	ECUZ1H471KBN	470P 50V [M]

CD Loading Unit Parts Location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